Subject Index

A

Acrylamide, photopolymerization of onto calcium carbonate particle surfaces and filled nylon-6, 1277

Acrylonitrile-butadiene rubber (NBR)
- linoleum flour-filled NBR compounds, cure characteristics, mechanical properties, and morphology, 909
- NBR/HNBR blends, miscibility and mechanical properties of, 2346
- NBR/organosilicate nanocomposites, mechanical, thermal, and barrier properties of, 2117

Acrylonitrile-butadiene-styrene (ABS)
- ABS composites for use in electronic and microwave devices, 588
- impact-modified nylon 6/ABS blends, 2340
- silica-graft ABS nanocomposites, preparation and thermal properties of, 1077

Additives
- antiplasticized thermosets: network architecture and additive chemistry and mechanical fortification by, 2125
- PET/montmorillonite nanocomposites, mechanical and rheological studies on, 1094
- slot coating, effects of polymer additives on operating windows of, 1970

Adhesion, interlayer adhesion of coextruded films, 948

Adhesive bonding
- microwave curing of adhesive-bonded joint, 1414
- microwave heating of single lap adhesive-bonded PP joint, 728

Alberta Polymer Asymmetric Minimixer (APAM), for specialty polymer blends and nanocomposites, 868

Alternating polypropylene copolymer, essential work of fracture analysis for compression molded alternating PPC, 580

Anisotropy
- fluorescence temperature measurements, 898
- real-time monitoring of during processing of biaxially stretched PP film, 805

Antiplasticized polymers
- antiplasticized polycarbonate, characteristics of, 1877
- antiplasticized thermosets: network architecture and additive chemistry and mechanical fortification by, 2125

Artificial neural networks, shrinkage and warpage prediction of injection-molded thin-wall parts using, 2029

Atactic polypropylene, metallocene-catalyzed atactic PP blends with bitumen, rheological aspects of, 1792

Atactic polystyrene, structure development in melt-spinning syndiotactic PS compared to atactic PS, 2141

Automotive applications
- injection molded automotive TPO: multilayer composite structure of varied orientations, 1588
- PC and PP boss and screw fasteners, axisymmetric model for thread forming in, 1498
- surface texture characterization of injection molded pigmented plastics, 1615

Avrami master curves, for iPP and PTFE, 2194

B

Back-propagation artificial neural networks (BPANNs), shrinkage and warpage prediction of injection-molded thin-wall parts using, 2029

Bacterial adhesion, semi-interpenetrating polymer networks based on PU and PVP, 940

Barium sulfate-filled medical-grade thermoplastic polyurethane, rheology and processing of, 1941

Barium titanate/ABS composites, for use in electronic and microwave devices, 588

Barrier properties
- of NBR/organosilicate nanocomposites, 2117
- of thermoset rubber/layered silicate nanocomposites, 1083

Bending strength, PA6/MMT nanocomposites prepared by melt compounding, 2070

Biaxial deformation, of PA-6, 231

Biaxial orientation, of LLDPE resins, 252

Biaxial stretching
- interlayer adhesion of coextruded films, 948
- of LLDPE resins, 252
- of PP film, real-time monitoring of fluorescence anisotropy and temperature during, 805

Biaxially blown PEI films, thermal properties of, 1419

Biaxially oriented polypropylene (BOPP), crystallization behavior of, 1749

Binary inorganic-organic polymer hybrid, phase behavior of during melt processing of, 1692

Biodegradable polymers
- poly(propylene carbonate)/starch composites, preparation and properties of, 2134
- three-arm poly(ε-caprolactone), 1491

Biodegradation, of thermoplastic starch/polycaprolactone blends, 1429

Bipolar plates, conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755

Birefringence, prediction of in optical media, 814

Bitumen, metallocene-catalyzed atactic PP blends with bitumen, rheological aspects of, 1792

Block copolymers, SBS block copolymer/homopolystyrene blends, morphology formation in, 1534

Blow molding
- injection stretch-blow molding of PET bottles, non-isothermal finite element model for, 1379
- stretch-blow molding of PET bottles, modeling and simulation, 1460

Blowing agents, polyurethane foams, determination of effective diffusion coefficient of blowing agents in, 2229

Blown film extrusion
- comparison of dynamic thin shell and quasi-cylindrical models for, 1267
- HDPE blown film, thickness uniformity and relation to rheological properties and density, 965
- LLDPE crystallinity, online measurement of with Raman spectroscopy, 1484
- of polypropylenes, crystallization and orientation development in, 210

Bonded fabric, PBT/PET conjugated fibers: melt spinning, fiber properties, and thermal bonding, 331

Bonding, microwave heating of single lap adhesive-bonded PP joint, 728

Boron nitride
- capillary extrusion processability of mLDPE and, 79
- metallocene polyethylenes with processing aids, rheological evaluation by multi-wave oscillations, 2047
- surface energy of, polymer processability and, 1543

Boss and screw assembly, PC and PP fasteners, axisymmetric model for thread forming in, 1498

Bottles
- injection stretch-blow molding of PET bottles, non-isothermal finite element model for, 1379
- stretch blow molding of PET, modeling

Indexed by Janet Perlman, Southwest Indexing, 610 East Bell Road, Suite 2-157, Phoenix, AZ 85022, (602) 569-7302.

and simulation of, 1460
Branched low-density polyethylene (BLDPE), effects of ZnO nanoparticles on thermal stabilization of, 1702
Branching
of high-density PE melts, processing conditions and rheological properties, 615
of LLDPE, miscibility of octene m-LLDPE and ZN-LLDPE in LDPE, rheological study of branch content on, 660
of PET, monitoring with chemorheology, 474
of PP long chain branching and processability of in thermoforming, 973
Brittle fracture, PE/PP multilayers, impact fracture toughness of, 1627
Broad-molecular-weight-distribution polyethylenes, extrusion of, 2266
Bubbles
bubble instabilities in film blowing extrusion, in-line scanning camera system for, 283
bubble removal in rotational molding, 388
foam growth: bubble growth in limited amount of liquid, 1900
nucleation and growth of in polymer solutions, 1890
Bulk free radical polymerization, helical barrel rheometer to study, 179
Butane, solubility of in molten PP and PS, 2083

C

Calcium carbonate
calcium carbonate-EMAA thermal sprayed coatings, mechanical and erosion properties of, 1448
photopolymerization of acrylamide onto calcium carbonate particle surfaces and filled nylon-6, 1277
Calendering, three-dimensional polymer flow in calendar bank, 1642
Calibrators, design of, 2216
Capacitive transducer, for in-mold monitoring of injection molding, 1571
Capillary die, radial extrudate swell and velocity of flowing PS melt in electro-magnetized die of an extrusion rheometer, 2298
Capillary extrusion
of metallocene-catalyzed LDPE, synergistic effect of boron nitride on, 79
time-scale approach for analysis of droplet coalescence in, 2254
Carbon, polyaniline/carbon nanotube composite Schottky contacts, 28
Carbon black
carbon black/ABS composites for use in electronic and microwave devices, 588
dispersion, temperature, and torque models for mixing carbon black with rubber, 1247
electrical conductivity of polymer blends containing, 528
Carbon dioxide
crystallization kinetics of poly(L-lactide) in contact with pressurized CO_2, 186
diffusion coefficients of supercritical carbon dioxide in molten polymers, measurement and prediction of, 1915
graft copolymerization, removal of ungrafted monomer via supercritical carbon dioxide extraction, 1636
interfacial tension in PS/LDPE melts saturated with supercritical CO_2, 18
PP-clay nanocomposites, visual observation of carbon dioxide foaming of, 1004
Carbon nanotubes
polyaniline/carbon nanotube composite Schottky contacts, 28
single-walled carbon nanotubes, PP crystallization and, 303
Carboxyl-terminated butadiene acrylonitrile (CTBN) rubber, epoxy nanocomposites modified with organoclay and rubber, morphology and performance of, 1178
Carboxylmethylcellulose (CMC), slot coating, effects of additives on operating windows of, 1970
Cast polypropylene (CPP), flow-induced morphology in, 1656
Casting, flow-induced morphology of cast PP, 1656
Castor oil based chain extended polyurethanes (PUs), structure-property relationship in Pani-filled chain extended PUs, 772
CDs, birefringence prediction of optical media, 814
Chain extended polyurethanes (PUs), structure-property relationship in Pani-filled chain extended PUs, 772
Chain extension, in recycled PET by reactive extrusion, 1579
Channel fill length, in extruders, 557
Chaotic mixer design, morphology in immiscible polymer systems and, 407
Chemorheology
PET branching, monitoring with, 474
polyurethane formation, 518
Chlorohydrin rubber, water swellable rubber compatibilized by PVA-g-PBA, mechanical properties, water swelling behavior, and morphology of, 72
Clay
epoxy nanocomposites modified with organoclay and rubber, morphology and performance of, 1178
epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, synthesis and characteristics of, 1170
EVOH/clay nanocomposites produced by dynamic melt mixing, 1019
exfoliation of clays: estimation of stress for separation of two platelets, 1187
interface studies in polymer-clay nanocomposites by electron paramagnetic resonance spectroscopy on surfactant probes, 1112
PA-66/clay, HDPE/clay, and HDPE/PA-66/clay nanocomposites, twin-screw extrusion of, 1152
PA6/MMT nanocomposites prepared by melt compounding, structure and properties of, 2070
PBT nanocomposites with different montmorillonites, preparation and characterization of, 1012
PET/montmorillonite nanocomposites, mechanical and rheological studies on, 1094
polyamide 1010/montmorillonite nanocomposite, non-isothermal crystallization kinetics of, 861
polycarbonate layered-silicate nanocomposites, mechanical response and rheological properties and, 825
polyolefin-clay nanocomposites, preparation and properties of, 1027
polyolefin nanocomposites, essential work of fracture analysis, 1142
polyolefin nanocomposites, formulation and development of, 1212
PP-clay nanocomposites, visual observation of carbon dioxide foaming of, 1004
PP-clay nanocomposites, new production method, 1205
PP nanocomposites, exfoliation and dispersion enhancement in by in-situ melt phase ultrasonication, 1773
PS/montmorillonite nanocomposites, compounding and characterization, 1046, 1061
PS/PE/clay nanocomposites prepared by ultrasound-assisted mixing process, 1198
sPS/clay nanocomposites, crystallization kinetics of, 2288
TPO nanocomposites, extrusion processing of, 1036
unsaturated polyester-clay nanocomposite synthesis using reactive organoclays, 345
vinylester resin nanocomposites with organo-modified montmorillonites: morphology, thermal, and mechanical properties of, 2041
Co-rotating twin-screw extrusion, of PP, filler dispersion and PP morphology, 880
Coalescence, time-scale approach for analysis of coalescence in processing flows, 2254
Coatings
calcium carbonate-EMAA thermal sprayed coatings, mechanical and erosion properties of, 1448
digital printing on polymer-coated packaging boards and, 2052
slot coating, effects of polymer additives on operating windows of, 1970
Cocontinuity, PEO/PS blends, detection of, 714
Coefficient of friction
erucamide in polyolefin films at elevated temperature, 2247
polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
Coextrusion
interlayer adhesion of coextruded films, 948
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
Cold forging, for microfabrication, 1998
Color, of pigmented plastics: measurements and predictions, 141
Compact discs
antiplasticized polycarbonates, char-

acteristics, 1877
birefringence prediction of optical media, 814
Compatibilization
amorphous polyester/polyamide blends, ionomeric compatibilizers and morphology and properties of, 1721
functionalized PP and PA-6, *in situ* polymerization and compatibilization, 648
maleic anhyride-grafted polyethylene-octene elastomer (POE-g-MA) for nylon 6/ABS blends, 2340
PA6/LDPE blends, injection moldability and properties of, 1732
PET/montmorillonite nanocomposites, mechanical and rheological studies on, 1094
of polyolefin-clay nanocomposites, preparation and properties of, 1027
PP/EPDM blends, *in situ* ultrasonic compatibilization of, 2019
TPU/SAN blends, morphology, thermal and thermo-mechanical properties and, 838
Composites
biodegradable poly(propylene carbonate)/starch composites, preparation and properties of, 2134
droplets with core/shell morphologies from HDPE/PS/PMMA ternary blends by twin-screw extrusion, 749
filled PMMA composites, filler particle size and rheological properties of, 452
injection molded microcellular PA-6 nanocomposites, 673
linoleum flour-filled NBR compounds, cure characteristics, mechanical properties, and morphology, 909
polyaniline/carbon nanotube composite Schottky contacts, 28
PP/woodflour composites, creep behavior of, 1594
single-walled carbon nanotubes, PP crystallization and, 303
sisal fiber reinforced PP, low-cost injection molding of, 1766
starch-based matrix composites reinforced with short sisal fibers, melt rheology of, 1907
unsaturated polyester-clay nanocomposite synthesis using reactive organoclays, 345
for use in electronic and microwave devices, 588
wollastonite-containing ethylene-propylene copolymer composites, scratch deformation characteristics of, 1738
Compression behavior, of pulp fiber networks, 45
Compression molding, conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755
Compressive modulus, of epoxy nanocomposites modified with organoclay and rubber, 1178
Compressive strength, of metallocene-catalyzed LLDPE foams for rotational molding, processing characteristics and, 638
Conducting polymers
conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755
polyaniline doped with inorganic acids, spectroscopic, transport, and morphological studies of, 1676
Conductive adhesives, critical volume fractions of silver-coated copper powders in, 2075
Conductive fillers, shear-induced migration of in injection molding, 2101
Constitutive model
of foams under large deformations, 463
viscoplastic response of iPP in cyclic tests, 548
Containers. ***See*** **Bottles; Packaging**
Controllers
temperature controllers for injection molding, 2308, 2318
temperature-dependent adaptive controller, 1925, 1934
Copper, electroless plating of on surface-modified FPI films, 362
Copper powder, critical volume fractions of silver-coated copper powders in conductive adhesives for microelectronic applications, 2075
Core impact modifier, shell thickness, effect on toughening PVC, 1885
Core/shell morphology, composite droplets with from HDPE/PS/PMMA ternary blends by twin-screw extrusion, 749
Creep behavior
of polycarbonate, 1783
of PP/woodflour composites, 1594
Cresol novolac epoxy resins, curing and pyrolysis of, 376
Critical volume fractions, of silver-coated copper powders in conductive adhesives for microelectronic applications, 2075
Crosslinking
peroxide crosslinking of Ziegler-Natta thermoplastic polyolefins, 131
polyurethane formation, curing kinetics and chemorheological analysis during, 518
Crystallinity
of LLDPE, online measurement of with Raman spectroscopy during blown film extrusion of, 1484
of PA-6/PA blends, structural organization and drawability of, 261
Crystallization
of PE/ethylene-α-olefin copolymer ternary blends, 1858
of poly(ethylene phthalate-*co*-terephthalate)s, 1682
of polypropylenes, fiber and film processing of PP of varying stereoregular forms and tacticity, 210
of PP, effect of carbon nanotubes on, 303
of PP, molecular structure and, 1749
quiescent crystallization of polymer melts, modeling of, 123
Crystallization kinetics
of iPP and PTFE, 2194
of polyamide 1010/montmorillonite nanocomposite, non-isothermal kinetics, 861
of poly(L-lactide) in contact with pressurized CO_2, 186
of sPS/clay nanocomposites, 2288
Cure kinetics
for epoxy nanocomposites, 1132
for polyurethane formation, 518
Curing
of cresol novolac epoxy resins, 376
of epoxy nanocomposites, 1132
of linoleum flour-filled NBR compounds, 909
microwave curing of an adhesive-bonded joint, 1414
polymerization kinetics of HEMA filled with HEMA-grafted silica preformed nanoparticles, initiation rate and, 1231
polyurethane formation, curing kinetics during, 518
Cyclic deformation, of epoxy polymers, 2240

D

Decomposition kinetics, of cresol novolac epoxy resins, 376
Deformation
of epoxy polymers, cyclic deformation behavior of, 2240
of foams under large deformations, phenomenological constitutive model of, 463
indentation of poly(formaldehyde), reinforced nylons, and PET, 1439
of PA-6, 231
of PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
of polymer melts, effect of pressure on shear and elongational viscosities, 1328
of PPVPh and blends, 241
of PS, strain-gradient yielding in PS and molecular weight, 1987
in PTFE sintering, simulation of, 1368
wollastonite-containing ethylene-propylene copolymer composites, scratch deformation characteristics of, 1738
Density
of HDPE blown film, thickness uniformity and, 965
of nitrile butadiene rubber in monochlorobenzene and o-dichlorobenzene solution, 88
of polyaniline-filled chain extended PUs, structure and, 772
Diallyl terephthalate, diffusion-controlled polymerization, kinetics and modeling of, 2005
Die design, micropelletizing die, flow analysis of, 1391
Die lines, in extrusion: film blowing experiments and numerical simulation, 1811
Die swell, parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
Differential scanning calorimetry (DSC), thermoplastic polyurethanes, phase transition behavior by coupled rheology/DSC measurements, 1514
Diffusion, shear field induced diffusion and molecular weight fractionation during polymer processing, 1283

Diffusion coefficients, of supercritical carbon dioxide in molten polymers, measurement and prediction of, 1915
Diffusion-controlled polymerization, of diallyl terephthalate, kinetics and modeling of, 2005
Digital printing, on polymer-coated packaging boards, surface modification and, 2052
Dimethyl phthalate (DMP), synthesis and crystallization of poly(ethylene phthalate-*co*-terephthalate)s, 1682
Dimethyl terephthalate (DMT), synthesis and crystallization of poly(ethylene phthalate-*co*-terephthalate)s, 1682
Diodes, polyaniline/carbon nanotube composite Schottky contacts, 28
Discrete element method, solids transport in single-screw extruder, using 3-D discrete particle simulation, 2203
Dispersion
filler dispersion and PP morphology, 880
models for in internal mixer, 1247
of PP nanocomposites, enhancement of by in-situ melt phase ultrasonication, 1773
Doping, polyaniline doped with inorganic acids: spectroscopic, transport, and morphological studies of, 1676
Draw pins, fiber draw using draw pins under isothermal conditions, 312
Drawing
PA-6/PA blends, structural organization and, 261
PET, characterization of films drawn in hot water, 223
polycyclohexylene terephthalate (PCT), microstructural modifications of in uniaxially hot-drawn films, 509
Drop deformation and breakup, modeling of under shear flow, 1258
Droplets
composite droplets with core/shell morphologies from HDPE/PS/PMMA ternary blends by twin-screw extrusion, 749
time-scale approach for analysis of coalescence in processing flows, 2254
Ductility
of PA-6,6/PET blends, 1405
of PA-6/PA blends, structural organization and, 261
DVDs
antiplasticized polycarbonates, characteristics, 1877
birefringence prediction of optical media, 814
Dynamic mechanical analysis, PET branching, monitoring with, 474
Dynamic mechanical properties
ethylene-octene copolymer, surface coated silica filler and, 163
of reactively extruded PVC/PS blends, 1473
Dynamic melt mixing, EVOH/clay nanocomposites produced by, 1019
Dynamic modulus, PET branching, monitoring with, 474

E

Effective diffusion coefficients, determination of in polyurethane foams, 2229
Ejection force, in tubular injection moldings, 891
Elastic modulus, PS/PE/clay nanocomposites prepared by ultrasound-assisted mixing process, 1198
Elastic properties, of semicrystalline thermoplastic polymers, micromechanical model for, 433
Electrical conductivity
conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755
of PEO/PS blends, comparison of methods for detection of cocontinuity, 714
of PMMA-intercalated graphite oxide/PMMA nanocomposite, 2335
of polyaniline doped with inorganic acids, spectroscopic, transport, and morphological studies of, 1676
of polymer blends containing LCP and carbon black, 528
shear-induced migration of conductive fillers in injection molding, 2101
Electrical properties, of polyaniline-filled chain extended PUs, structure and, 772
Electroactive polymer, patterns with metal incorporation on a polymeric substrate, 2061
Electroless copper plating, on surface-modified FPI films, 362
Electron beam irradiation, of PEN/PET blends, 395
Electron paramagnetic resonance spectroscopy, interface studies in polymer-clay nanocomposites by, 1112
Electronic devices, polymeric composites for, 588
Elongation
of PET/PE and PC/PE blends with high interfacial contact during elongation, deformation and morphology development of, 1561
of polymer melts, effect of pressure on, 1328
Elongation at break, of polyaniline-filled chain extended PUs, structure and, 772
Elongation-to-break, of compatibilized PP/nylon-66/PS blends, 1800
Environmental stress cracking, of PBA co-poly(ester ester), 1319
EPM rubber, crosslinking of, 131
Epoxy-amine blend, fibrillar morphology of crosslinked epoxy in PS continuous phase by reactive extrusion, 625
Epoxy nanocomposites
cure kinetics for, 1132
epoxy nanocomposites modified with organoclay and rubber, morphology and performance of, 1178
epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, synthesis and characteristics of, 1170
Epoxy resins
antiplasticized thermosets: network architecture and additive chemistry and mechanical fortification by, 2125
crosslinked epoxy fibrillar morphology in PS continuous phase by reactive extrusion, 625
curing and pyrolysis of cresol novolac resins, 376
cyclic deformation behavior of, 2240
epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, synthesis and characteristics of, 1170
Erosion properties, of calcium carbonate-EMAA thermal sprayed coatings, 1448
Erucamide
polyolefin films at elevated temperature, 2247
polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
Essential work of fracture
for compression molded alternating PPC, 580
of *in situ* microfibrillar PET/PE blends, 2165
for polyolefin nanocomposites, 1142
of rubber-modified PA6 in impact, 1707
Ethylene-α-olefin copolymer
PE/ethylene-α-olefin copolymer ternary blends, thermal properties and crystallization behavior of, 1858
PP/ultra-low-density ethylene-α-olefin copolymer blends, rotational molding of, 1662
Ethylene-acrylic acid copolymer (EAA), as compatibilizer for PA6/LDPE blends, injection moldability and properties of, 1732
Ethylene-ethacrylate copolymer (EEA), diffusion coefficient of supercritical carbon dioxide in molten polymer, measurement and prediction of, 1915
Ethylene-methacrylic acid copolymer (EMAA), sprayed coatings, mechanical and erosion properties of, 1448
Ethylene methyl acrylate (E/MA), as extrusion coating for digital printing on polymer-coated packaging boards, 2052
Ethylene-octene copolymer
dynamic mechanical thermal properties of, surface coated silica filler and, 163
sequential injection overmolding of on PP homopolymer core, 2110
Ethylene-propylene copolymer, wollastonite-containing ethylene-propylene copolymer composites, scratch deformation of, 1738
Ethylene-propylene-diene rubber (EPDM)
PP/EPDM blends, effect of ultrasound on extrusion: structure and mechanical properties, 1509
PP/EPDM blends, *in situ* ultrasonic compatibilization of, 2019
Ethylene-vinyl acetate copolymer (EVA)
EVA based nanocomposites, morphology of under shear and extensional flow, 1220
LLDPE/EVA copolymer films, stress relaxation in, 1716
Ethylene-vinyl alcohol copolymers (EVOH)
EVOH/clay nanocomposites produced

by dynamic melt mixing, 1019
high barrier EVOH-based blends for food packaging, uniaxial tensile behavior and thermoforming characteristics of, 598
Exfoliation
of clays in nanocomposites: estimation of stress for separation of two platelets, 1187
of PP nanocomposites, enhancement of by in-situ melt phase ultrasonication, 1773
Extensional flow
morphology of EVA based nanocomposites under, 1220
of PS nanocomposites, 1061
Extensional viscosity, of high-density PE melts, processing conditions and, 615
Extraction, graft copolymerization, removal of ungrafted monomer via supercritical carbon dioxide extraction, 1636
Extruders, fill length behavior in, 557
Extrusion
of barium sulfate-filled medical-grade TPU, 1941
blown film extrusion of PP, crystallization and orientation development in, 210
of broad-molecular-weight-distribution polyethylenes, 2266
calibrator design for extruded profiles, 2216
capillary extrusion processability of mLDPE, effect of boron nitride on, 79
film blowing extrusion, die lines in, 1811
film blowing extrusion, in-line scanning camera system for bubble instabilities, 283
interlayer adhesion of coextruded films, 948
modeling of polymer melting, drop deformation, and breakup under shear flow, 1258
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
of PP/EPDM blends, *in situ* ultrasonic compatibilization, 2019
of PP/EPDM blends, effect of ultrasound on structure and mechanical properties, 1509
of PP, filler dispersion and PP morphology, 880
of PVC/LDPE melt-blends, structural changes in, 487
single-screw extruder, temperature gradients in channels of, 2148
single-screw extruder, solids transport in using 3-D discrete particle simulation, 2203
of TPO nanocomposites, 1036
twin-screw extrusion, composite droplets with core/shell morphologies from HDPE/PS/PMMA ternary blends by, 749
Extrusion coatings, digital printing on polymer-coated packaging boards and, 2052
Extrusion foaming, strain hardening in PP and, 2090
Extrusion rheometer
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
radial extrudate swell and velocity of flowing PS melt in electro-magnetized die of, 2298

F

Failure
PB co-poly(ester ester), environmental stress cracking, 1319
PE/PP multilayers, impact fracture toughness of, 1627
Fiber draw, using draw pins under isothermal conditions, 312
Fiber optics
fluorescence temperature measurements, 898
real-time monitoring of fluorescence anisotropy and temperature during processing of biaxially stretched PP film, 805
Fiber-reinforced composites
sisal fiber reinforced PP, low-cost injection molding of, 1766
starch-based matrix composites reinforced with short sisal fibers, melt rheology of, 1907
Fiber-reinforced polymers, compression behavior of pulp fiber networks, 45
Fibrillar morphology, of crosslinked epoxy in PS continuous phase by reactive extrusion, 625
Fill length, in extruders, 557
Fillers
ethylene-octene copolymer, surface coated silica filler and dynamic mechanical thermal properties, 163
filled PMMA composites, filler particle size and rheological properties of, 452
linoleum flour-filled NBR compounds, cure characteristics, mechanical properties, and morphology of, 909
photopolymerization of acrylamide onto calcium carbonate particle surfaces and filled nylon-6, 1277
PP, filler dispersion and morphology of, 880
shear-induced migration of conductive fillers in injection molding, 2101
Film blowing
bubble instabilities in, in-line scanning camera system for, 283
die lines in extrusion: experiments and numerical simulation, 1811
Film insert injection molding, interface of polypropylene film/polypropylene matrix, mechanical and morphological properties of, 2327
Films
biaxially blown PEI films containing TLCP, thermal properties, 1419
biaxially stretched PP, real-time monitoring of fluorescence anisotropy and temperature during processing, 805
blown film extrusion, comparison of dynamic thin shell and quasi-cylindrical models for, 1267
bubble instabilities in film blowing extrusion, in-line scanning camera system for, 283
fluorinated polyimide films, electroless plating of copper on, 362
HDPE blown film, thickness uniformity and relation to rheological properties and density, 965
interface of film insert injection molded polypropylene-film/polypropylene matrix, mechanical and morphological properties of, 2327
interlayer adhesion of coextruded films, 948
online measurement of crystallinity with Raman spectroscopy during blown film extrusion of LLDPE, 1484
oriented fluorosulfonated/PTFE copolymer, structure and properties of, 272
PA-6/PA blends, structural organization and drawability of, 261
PET, characterization of films drawn in hot water, 223
polycyclohexylene terephthalate (PCT), microstructural modifications of in uniaxially hot-drawn films, 509
poly(keto-ether-imide) films, uniaxial stretching of, 1360
polyolefin films, erucamide in at elevated temperature, 2247
polyolefin films, stress relaxation in low-shrink-force films, 1716
polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
Finite element model
injection stretch-blow molding of PET bottles, nonisothermal, 1379
intermeshing co-rotating twin-screw extruders: particle trajectories, residence times, and flow behavior of kneading discs in, 779
micropelletization of PET, 1391
PC and PP boss and screw fasteners, axisymmetric model for thread forming in, 1498
PTFE sintering: thermal stresses and deformation behavior, 1368
Flexural modulus, of metallocene-catalyzed LLDPE foams for rotational molding, processing characteristics and, 638
Flow
of cast PP, flow-induced morphology of, 1656
in injection molding with microstructures, simulation of, 1866
in micropelletizing die, 1391
of PS nanocomposites, 1061
shear field induced diffusion and molecular weight fractionation during polymer processing, 1283
slot coating, effects of polymer additives on operating windows of, 1970
three-dimensional polymer flow in calendar bank, 1642
two-component transfer molding: interface evolution and penetration behavior, 687, 697
Fluorescence
fluorescence temperature measurements, 898
real-time monitoring of fluorescence anisotropy during processing of biaxially stretched PP film, 805
Fluorinated polyimide films, electroless plating of copper on, 362
Fluoropolymers
boron nitride with, polymer processa-

bility and, 1543
poly(ethylene-co-chlorotrifluoroethylene) and polyvinylidene fluoride, structure and properties of, 113
Foaming
PP-clay nanocomposites, visual observation of carbon dioxide foaming of, 1004
strain hardening in PP extrusion foaming, 2090
Foams
butane and isobutane solubility in molten PP and PS, 2083
dynamics of foam growth: bubble growth in limited amount of liquid, 1900
injection molded LDPE and mPE foams, rheological properties of, 2158
metallocene-catalyzed LLDPE foams for rotational molding, processing characteristics and mechanical properties of, 638
microcellular foamed HDPE/PP blends, cell morphology and impact strength of, 1551
polyurethane foams, determination of effective diffusion coefficient of blowing agents in, 2229
reacting polyurethane foams from soy oil, viscoelastic changes and cell opening of, 1977
under large deformations, phenomenological constitutive model of, 463
Foil formation, three-dimensional polymer flow in calendar bank, 1642
Food packaging. *See* Bottles; Packaging
Fractionation, shear field induced diffusion and molecular weight fractionation during polymer processing, 1283
Fracture
alternating poly(propylene carbonate) copolymer, essential work of fracture analysis for compression molded alternating PPC, 580
PE/PP multilayers, impact fracture toughness of, 1627
polyolefin nanocomposites, essential work of fracture, 1142
at PS/PBS partially miscible polymer interfaces, 929
rubber-modified PA6, essential work of fracture on impact, 1707
Fracture toughness
of epoxy nanocomposites modified with organoclay and rubber, 1178
polyolefin nanocomposites, essential work of fracture analysis, 1142
Free volume, in mechanically milled PS and PC, positron annihilation lifetime spectroscopy study, 1351
Friction
erucamide in polyolefin films at elevated temperature, 2247
polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
ultrahigh molecular weight PE/PP blends, sliding wear, 197
Fuel cells, conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755

G

Gas-assisted injection molding, primary and secondary gas penetration during, 983, 992
Gas penetration, in gas-assisted injection molding, 983, 992
Gas permeation, hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
Gate design, gate freeze-off time, analysis of, 1
Genetic algorithms, runner balancing by direct genetic optimization of shrinkage, 1949
Graft copolymerization
fluorinated polyimide films modified by surface graft copolymerization with 1-vinylimidazole and 4-vinylpyridine, 362
removal of ungrafted monomer via supercritical carbon dioxide extraction, 1636
Graphite, PP/graphite nanocomposites by thermo-kinetic mixing, 1162
Graphite oxide, PMMA-intercalated graphite oxide/PMMA nanocomposite, 2335

H

Hardness, of blends of ultrasonically treated unfilled polyurethane rubber, 794
Heat distortion temperature, PA6/MMT nanocomposites prepared by melt compounding, 2070
Heat transfer
in injection molding with microstructures, simulation of, 1866
in melting polymers in laminar flow field, 423
Helical barrel rheometer, to study bulk free radical polymerization, 179
Heterogeneous nucleation, structure modification of iPP by bi-component nucleating systems, 352
High barrier EVOH-based blends for food packaging, uniaxial tensile behavior and thermoforming characteristics of, 598
High-density polyethylene (HDPE)
blown film, thickness uniformity and relation to rheological properties and density, 965
diffusion coefficient of supercritical carbon dioxide in molten polymer, measurement and prediction of, 1915
HDPE/clay and HDPE/PA-66/clay nanocomposites, twin-screw extrusion of, 1152
HDPE melts, rheological behavior and processing conditions, 615
HDPE/PS/PMMA ternary blends, composite droplets with core/shell morphologies from by twin-screw extrusion, 749
microcellular foamed HDPE/PP blends, cell morphology and impact strength of, 1551
PE/ethylene-α-olefin copolymer ternary blends, thermal properties and crystallization behavior of, 1858
pressure-volume-temperature data of PE liquids to determine solubility and interaction parameters, 853
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
High-impact polystyrene (HIPS), electrical conductivity of HIPS blends containing LCP and carbon black, 528
Hollow waveguide, monitoring of temperature decay of polymer streams during injection molding, 955
Homopolystyrene, of SBS block copolymer/homopolystyrene blends, morphology formation in, 1534
Hoop stress, predicting triaxial residual stresses in plastic pipe, 1828
Hot isostatic pressing, of UHMWPE, 1848
Hot stretch ratio, essential work of fracture of *in situ* microfibrillar PET/PE blends and, 2165
Hydrofluorocarbons, determination of effective diffusion coefficients of in polyurethane foams, 2229
Hydrogen bonds, PVPh and blends, orientation of and hydrogen bonds, 241
Hydrogenated acrylonitrile-butadiene rubber (HNBR), NBR/HNBR blends, miscibility and mechanical properties of, 2346
Hydrosilylated polypropylenes, surface characteristics of, 56
Hydroxy ethyl methacrylate (HEMA), polymerization kinetics of HEMA filled with HEMA-grafted silica preformed nanoparticles, initiation rate and, 1231

I

Immiscible polymer systems
electrical conductivity of HIPS blends containing LCP and carbon black, 528
fibrillar morphology of crosslinked epoxy in PS continuous phase by reactive extrusion, 625
inorganic-organic polymer hybrid, phase behavior of during melt processing of, 1692
morphology development in, chaotic mixer design and operating conditions and, 407
octene m-LLDPE and ZN-LLDPE miscibility in LDPE, rheological study of branch content on, 660
PET/PE and PC/PE blends with high interfacial contact during elongation, deformation and morphology development of, 1561
polymer blend nanocomposites, structure-property relationships, 1103
Impact, essential work of fracture of rubber-modified PA6 in impact, 1707
Impact fracture toughness, of PE/PP multilayers, 1627
Impact modifiers
core-shell impact modifier shell thickness and toughening PVC, 1885
maleic anhydride-grafted polyethylene-octene elastomer (POE-g-MA) for nylon-6/ABS blends, 2340
Impact strength
of compatibilized PP/nylon-66/PS blends, 1800
of microcellular foamed HDPE/PP blends, cell morphology and, 1551
of PA6/MMT nanocomposites pre-

pared by melt compounding, 2070
In-plane birefringence, prediction of in optical media, 814
***In situ* composites,** thermal properties of biaxially blown PEI films containing TLCP, 1419
Indentation
of poly(formaldehyde), reinforced nylons, and PET, 1439
strain-gradient yielding in PS and molecular weight, 1987
Infrared trichroism, orientation of PA-6 by, 231
Infrared waveguide method, remote sensing of temperature decay of polymer streams during injection molding, 955
Initiation rate, polymerization kinetics of HEMA filled with HEMA-grafted silica preformed nanoparticles and, 1231
Injection-compression molded discs, birefringence prediction of optical media, 814
Injection molding
automotive TPO: multilayer composite structure of varied orientations, 1588
capacitive transducer for in-mold monitoring of, 1571
of compatibilized PA6/LDPE blends, 1732
conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755
ejection force in tubular injection moldings, 891
gas-assisted, primary and secondary gas penetration during, 983, 992
injection molded LDPE and mPE foams, rheological properties of, 2158
interface of film insert injection molded polypropylene film/polypropylene matrix, mechanical and morphological properties of, 2327
mechanical properties and thermomechanical environment, 1522
of micro-optic components, 564
of microcellular PA-6 nanocomposites, 673
of microcellular plastics, mathematical modeling and numerical simulation of cell growth in, 2274
with microstructures, flow and heat transfer simulation of, 1866
monitoring of temperature decay of polymer streams during, 955
PVC degradation during injection molding in rectangular channel, computational prediction of, 1295
runner balancing by direct genetic optimization of shrinkage, 1949
sequential injection overmolding of elastomeric ethylene-octene copolymer on PP homopolymer core, 2110
shear-induced migration of conductive fillers in, 2101
shrinkage and warpage of thin-wall parts, optimization of, 917
of sisal fiber reinforced PP, low-cost injection molding of, 1766
solid-bed break-up in plasticization of reciprocating-screw injection molding, 1313
surface texture characterization of molded pigmented plastics, 1615
temperature control of, 2308, 2318
thermomechanical environment and mechanical properties of molded parts, 1522
virtual sensing approach for monitoring of, 1605
Injection molding machines
gate freeze-off time in, 1
PET, morphology and mechanical properties of, 2174
temperature control in, 2308, 2318
temperature-dependent adaptive controller, 1925, 1934
Injection stretch-blow molding, of PET bottles, non-isothermal finite element model for, 1379
Inorganic acids, polyaniline doped with: spectroscopic, transport, and morphological studies of, 1676
Inorganic-organic polymer hybrid, phase behavior of during melt processing of, 1692
Interaction parameters, pressure-volume-temperature data of PE liquids to determine, 853
Interface
of film insert injection molded polypropylene-film/polypropylene matrix, mechanical and morphological properties of, 2327
gas-assisted injection molding, primary and secondary gas penetration during, 983, 992
partially miscible polymer interfaces: fracture behavior at, 929
in polymer-clay nanocomposites by electron paramagnetic resonance spectroscopy on surfactant probes, 1112
two-component transfer molding: interface evolution, 687, 697
Interfacial tension, measurement of in PS/LDPE melts saturated with supercritical CO_2, 18
Interlayer adhesion, of coextruded films, 948
Intermeshing co-rotating twin-screw extruders, particle trajectories, residence times, and flow behavior of kneading discs in, 779
Interpenetrating polymer networks, semi-IPNs based on PU and PVP, structure-property relationships and bacterial adhesion, 940
Inverse gas chromatography (IGC), pressure-volume-temperature data of PE liquids to determine solubility and interaction parameters, 853
Ionomeric compatibilizers, amorphous polyester/polyamide blends, morphology and properties of, 1721
Irradiation
electron beam irradiation of PEN/PET blends, 395
ultrasound irradiation of PP/EPDM blend extrusion, 1509
Isobutane, solubility of in molten PP and PS, 2083
Isotactic polypropylene (iPP)
crystallization and orientation development in fiber and film processing of, 210
crystallization kinetics, master quotients, master curves, and Nakamura-Ozawa equations, 2194
iPP/EPDM blends, *in situ* ultrasonic compatibilization of, 2019
iPP nanocomposites, exfoliation and dispersion enhancement in by in-situ melt phase ultrasonication, 1773
structure modification of by bi-component nucleating systems, 352
viscoplastic response of in cyclic tests, constitutive equations for and strain rate, 548
Izod impact strength, of compatibilized PP/nylon-66/PS blends, 1800

J

Joints
microwave curing of adhesive-bonded joint, 144
microwave heating of single lap adhesive-bonded PP joint, 728

K

Kinetics. *See also* Crystallization kinetics; Cure kinetics
of diffusion-controlled polymerization of diallyl terephthalate, 2005
helical barrel rheometer to study bulk free radical polymerization, 179
iPP and PTFE crystallization, 2194
non-isothermal crystallization kinetics of polyamide 1010/montmorillonite nanocomposite, non-isothermal kinetics, 861
polymerization kinetics of HEMA filled with HEMA-grafted silica preformed nanoparticles, initiation rate and, 1231
thermoplastic polyurethane polymerization, rheo-kinetic measurement of in measurement kneader, 1648
three-arm poly(ε-caprolactone) synthesis, 1491

L

Laminar flow, heat transfer behavior of melting polymer during, 423
Linear low-density polyethylene (LLDPE)
biaxial stretching and structure of, 252
LLDPE/EVA copolymer films, stress relaxation in, 1716
metallocene-catalyzed foams for rotational molding, processing characteristics and mechanical properties of, 638
miscibility of octene m-LLDPE and ZN-LLDPE in LDPE, rheological study of branch content effect on, 660
online measurement of crystallinity with Raman spectroscopy during blown film extrusion of, 1484
polyolefin-clay nanocomposites, preparation and properties of, 1027
polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
Linoleum flour-filled NBR compounds, cure characteristics, mechanical properties, and morphology, 909
Liquid crystalline polymer (LCP)
electrical conductivity of polymer blends containing, 528

poly(ether ketone ketone), improvement of processability of by addition of thermotropic LCP, 541
Loading, polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
Long chain branching, of PP, processability of in thermoforming and, 973
Longitudinal stress, predicting triaxial residual stresses in plastic pipe, 1828
Low-density polyethylene (LDPE)
branched LDPE, effects of ZnO nanoparticles on thermal stabilization of, 1702
diffusion coefficient of supercritical carbon dioxide in molten polymer, measurement and prediction of, 1915
as extrusion coating for digital printing on polymer-coated packaging boards, 2052
injection molded LDPE and mPE foams, rheological properties of, 2158
interfacial tension in PS/LDPE melts saturated with supercritical CO_2, 18
metallocene-catalyzed LDPE, synergistic effect of boron nitride on capillary extrusion processability of, 79
miscibility of octene m-LLDEP and ZN-LLDPE in, rheological study of branch content effect on, 660
PA6/LDPE blends, injection moldability and properties of, 1732
pressure-volume-temperature data of PE liquids to determine solubility and interaction parameters, 853
PVC/LDPE melt-blends, structural changes in, 487
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
starch-filled, tensile properties at room temperature, 1839
Lubricants, stearyl methacrylate-co-styrene-co-vinyl pyrrolidinone (SMA-S-VP) copolymers in polyalpha olefin (PAO4), solution rheology of, 736

M

Magadiite, PS magadiite nanocomposites, 1122
Maleic anhydride-grafted polyethylene-octene elastomer (POE-g-MA), for nylon-6/ABS blends, 2340
Master curves, for iPP and PTFE, 2194
Master quotients, for iPP and PTFE, 2194
Mathematical modeling
of cell growth in injection molding of microcellular plastics, 2274
of foam growth, bubble growth in limited amount of liquid, 1900
Matrix composites, starch-based matrix composites reinforced with short sisal fibers, melt rheology of, 1907
Measurement kneader, rheo-kinetic measurement of thermoplastic polyurethane polymerization in, 1648
Mechanical milling, free volume changes in mechanically milled PS and PC by positron annihilation lifetime spectroscopy (PALS), 1351
Mechanical properties
of alternating poly(propylene carbonate) copolymer, 580
of antiplasticized thermosets, 2125
of blends of ultrasonically treated unfilled polyurethane rubber, 794
of calcium carbonate-EMAA thermal sprayed coatings, 1448
of compatibilized PP/nylon-66/PS blends, 1800
of compatibilized TPU/SAN blends, 838
of epoxy nanocomposites modified with organoclay and rubber, 1178
of epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, 1170
of hot-fillable containers containing PET/PEN copolymers and blends, 1670
of impact-modified nylon 6/ABS blends, 2340
of injection molded microcellular PA-6 nanocomposites, 673
of injection molded PET, 2174
of injection moldings, thermomechanical environment and, 1522
interface of film insert injection molded polypropylene film/polypropylene matrix, 2327
of linoleum flour-filled NBR compounds, 909
of metallocene-catalyzed LLDPE foams for rotational molding, processing characteristics and, 638
of NBR/HNBR blends, 2346
of NBR/organosilicate nanocomposites, 2117
of oriented fluorosulfonated/PTFE copolymer, structure and, 272
of PA-6,6/PET blends, 1405
of PA6/LDPE blends, injection moldability and, 1732
of PA6/MMT nanocomposites prepared by melt compounding, 2070
of PBT/PET conjugated fibers, 331
of PET films drawn in hot water, 223
of PET/montmorillonite nanocomposites, 1094
of PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
of PMMA-intercalated graphite oxide/PMMA nanocomposite, 2335
of polyamide-6, 231
of polyaniline-filled chain extended PUs, structure and, 772
of polycarbonate layered-silicate nanocomposites, 825
of polyester/polyamide blends, ionomeric compatibilizers and, 1721
of poly(ethylene-co-chlorotrifluoroethylene) and polyvinylidene fluoride, 113
of poly(propylene carbonate)/starch composites, 2134
of PP/EPDM blends, effect of ultrasound on extrusion and properties of, 1509
of PVC/SBR blends spatially resolved by nanoindentation, micromechanical properties of, 609
of reactively extruded PVC/PS blends, 1473
of semi-interpenetrating polymer networks based on PU and PVP, 940
of sisal fiber reinforced PP, 1766
of swellable rubber compatibilized by PVA-g-PBA, 72
of thermoplastic starch/polycaprolactone blends, 1429
of thermoset rubber/layered silicate nanocomposites, 1083
of vinylester resin nanocomposites with organo-modified montmorillonites, 2041
Medium-density polyethylene (MDPE), predicting triaxial residual stresses in plastic pipe, 1828
Melt compounding, PA6/MMT nanocomposites prepared by melt compounding, structure and properties of, 2070
Melt fracture
boron nitride and capillary extrusion processability of mLDPE, 79
boron nitride surface energy and polymer processability, 1543
Melt intercalation
EVOH/clay nanocomposites produced by, 1019
PBT nanocomposites with different montmorillonites, preparation and characterization of, 1012
Melt miscibility, of PE liquids, pressure-volume-temperature data to determine, 853
Melt mixing
PP/graphite nanocomposites by thermo-kinetic mixing, 1162
PS/PE/clay nanocomposites prepared by, 1198
Melt modification, PET branching, monitoring with chemorheology, 474
Melt rheology, of starch-based matrix composites reinforced with short sisal fibers, 1907
Melt spinning
of PBT/PET conjugated fibers, 331
of polypropylenes, crystallization and orientation development in, 210
of polypropylenes, structure development in melt-spinning syndiotactic PS compared to atactic PS, 2141
Melt viscosity, PET branching, monitoring with, 474
Membranes, hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
Metallocene-based polyolefin elastomers, ultra-low-density ethylene-α-olefin copolymers, rotational molding characteristics and molecular structure of, 496
Metallocene-catalyzed polyethylenes
LDPE, synergistic effect of boron nitride on capillary extrusion processability of, 79
LLDPE foams for rotational molding, processing characteristics and mechanical properties of, 638
octene m-LLDPE miscibility in LDPE, rheological study of branch content and, 660
polyolefin-clay nanocomposites, preparation and properties of, 1027
processing aids with, rheological evaluation by multi-wave oscillations, 2047
Metallocene-catalyzed polypropylene, atactic PP blends with bitumen, rheological aspects of, 1792

Micro-optic components, injection-molded, production and analysis of, 564
Microcellular foams
butane and isobutane solubility in molten PP and PS, 2083
HDPE/PP blends, cell morphology and impact strength of, 1551
Microcellular plastics
bubble nucleation and growth of in polymer solutions, 1890
cell growth in injection molding of, mathematical modeling and numerical simulation of, 2274
injection molded microcellular PA-6 nanocomposites, 673
Microelectronic applications, critical volume fractions of silver-coated copper powders in conductive adhesives for, 2075
Microfabrication, cold forging method for, 1998
Microfibrillar blends, essential work of fracture of *in situ* microfibrillar PET/PE blends, 2165
Micromechanical analysis, of elastic properties of semicrystalline thermoplastic polymers, 433
Micromechanical properties, of PVC/SBR blends spatially resolved by nanoindentation, 609
Micropelletizing die, flow analysis of, 1391
Microstructure
immiscible polymer systems, chaotic mixer design and, 407
of injection molded automotive TPO: multilayer composite structure of varied orientations, 1588
of injection moldings, thermomechanical environment and, 1522
nylon 6 vibration welded to nylon 66, 760
of polycyclohexylene terephthalate (PCT), microstructural modifications of in uniaxially hot-drawn films, 509
polyolefin nanocomposites, essential work of fracture analysis, 1142
UHMWPE, hot isostatic pressing of, 1848
Microstructures, injection molding with, flow and heat transfer simulation of, 1866
Microwave curing
of an adhesive-bonded joint, 1414
of single lap adhesive-bonded PP joint, 728
Microwave devices, polymeric composites for, 588
Miscibility
of NBR/HNBR blends, 2346
of octene m-LLDEP and ZN-LLDPE in LDPE, rheological study of branch content effect on, 660
of PE liquids, pressure-volume-temperature data to determine, 853
Mixing
chaotic mixer design and morphology in immiscible polymer systems, 407
dispersion, temperature, and torque models for internal mixer, 1247
intermeshing co-rotating twin-screw extruders: particle trajectories, residence times, and flow behavior of kneading discs in, 779
miniature mixer for specialty polymer blends and nanocomposites, 868
PP/graphite nanocomposites by thermo-kinetic mixing, 1162
PS/PE/clay nanocomposites prepared by ultrasound-assisted mixing process, 1198
Model-based virtual sensing, for monitoring injection molding, 1605
Modeling
blown film extrusion, comparison of dynamic thin shell and quasi-cylindrical models for, 1267
cell growth in injection molding of microcellular plastics, 2274
cure kinetics of epoxy nanocomposites, 1132
of diffusion-controlled polymerization of diallyl terephthalate, 2005
dispersion, temperature, and torque for internal mixer, 1247
elastic properties of semicrystalline thermoplastic polymers, micromechanical model for, 433
fiber draw using draw pins under isothermal conditions, 312
foam growth: bubble growth in limited amount of liquid, 1900
foams under large deformations, phenomenological constitutive model of, 463
gas-assisted injection molding, primary and secondary gas penetration during, 983, 992
indentation of poly(formaldehyde), reinforced nylons, and PET, 1439
injection stretch-blow molding of PET bottles, 1379
intermeshing co-rotating twin-screw extruders: particle trajectories, residence times, and flow behavior of kneading discs in, 779
micropelletization of PET, 1391
microwave curing of adhesive-bonded joint, 1414
PC and PP boss and screw fasteners, axisymmetric model for thread forming in, axisymmetric model, 1498
polymer melting, drop deformation, and breakup under shear flow, 1258
PVC degradation during injection molding in rectangular channel, computational prediction of, 1295
quiescent crystallization of polymer melts, 123
solid-bed break-up in plasticization of reciprocating-screw injection molding, 1313
stretch-blow molding of PET bottles, 1460
temperature control of injection molding, 2308
two-component transfer molding: interface evolution and penetration behavior, 687, 697
viscoplastic response of iPP in cyclic tests, constitutive equations and strain rate, 548
Modulus of elasticity
of PA6/MMT nanocomposites prepared by melt compounding, 2070
of reacting polyurethane foams from soy oil, 1977
Mold design, ejection force in tubular injection moldings, 891
Molecular weight
of high-density PE melts, processing conditions and rheological properties, 615
strain-gradient yielding in PS and, 1987
Monitoring
capacitive transducer for in-mold monitoring of injection molding, 1571
of fluorescence anisotropy and temperature during processing of biaxially stretched PP film, 805
fluorescence temperature measurements, 898
of PET branching, through chemorheology, 474
of temperature gradients in channels of single-screw extruder, 2148
virtual sensing approach for monitoring injection molding, 1605
Montmorillonite
epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, synthesis and characteristics of, 1170
PA6/MMT nanocomposites prepared by melt compounding, structure and properties of, 2070
PBT nanocomposites with different montmorillonites, preparation and characterization of, 1012
PET/montmorillonite nanocomposites, mechanical and rheological studies on, 1094
polyamide 1010/montmorillonite nanocomposite, non-isothermal crystallization kinetics of, 861
PP-clay nanocomposites, visual observation of carbon dioxide foaming of, 1004
PP nanocomposites, exfoliation and dispersion enhancement in by in-situ melt phase ultrasonication, 1773
PS/montmorillonite nanocomposites, compounding and characterization, 1046, 1061
TPO nanocomposites, extrusion processing of, 1036
vinylester resin nanocomposites with organo-modified montmorillonites: morphology, thermal, and mechanical properties of, 2041
Morphology
of biaxially oriented polypropylene (BOPP), 1749
of cast PP, flow-induced morphology of, 1656
of compatibilized PP/nylon-66/PS blends, 1800
of compatibilized TPU/SAN blends, 838
crosslinked epoxy fibrillar morphology in PS continuous phase by reactive extrusion, 625
of epoxy nanocomposites modified with organoclay and rubber, 1178
of EVA based nanocomposites under shear and extensional flow, 1220
of fillers in linoleum flour-filled NBR compounds, cure characteristics and mechanical properties and, 909
in immiscible polymer systems, chaotic mixer design and operating conditions and, 407
of impact-modified nylon 6/ABS blends, 2340
of injection molded microcellular PA-6

nanocomposites, 673
of injection molded PET, 2174
of interface of film insert injection molded polypropylene film/polypropylene matrix, 2327
of LLDPE resins, biaxial stretching and, 252
of microcellular foamed HDPE/PP blends, cell morphology and impact strength of, 1551
of oriented fluorosulfonated/PTFE copolymer, properties of and, 272
of PA-6,6/PET blends, 1405
of PA-6/PA blends, drawability and, 261
of PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
of polyaniline doped with inorganic acids, 1676
of polyaniline-filled chain extended PUs, properties and, 772
of polycyclohexylene terephthalate (PCT), microstructural modifications of in uniaxially hot-drawn films, 509
of polyester/polyamide blends, ionomeric compatibilizers and, 1721
of poly(ethylene-co-chlorotrifluoroethylene) and polyvinylidene fluoride, 113
of polymer blend nanocomposites, structure-property relationships, 1103
of PP/EPDM blends, effect of ultrasound on extrusion and properties of, 1509
of PP, filler dispersion and, 880
of PVC/LDPE melt-blends, structural changes in, 487
of rubber-modified thermoplastics, surface gloss and, 96
of SBS block copolymer/homopolystyrene blends, 1534
in semi-interpenetrating polymer networks based on PU and PVP, 940
structure modification of iPP by bi-component nucleating systems, 352
of swellable rubber compatibilized by PVA-g-PBA, 72
of thermoplastic starch/polycaprolactone blends, 1429
of ultra-low-density ethylene-α-olefin copolymers, rotational molding characteristics and, 496
of vinylester resin nanocomposites with organo-modified montmorillonites, 2041
of wollastonite-containing ethylene-propylene copolymer composites, 1738

Multi-phase polymers, surface gloss on rubber-modified thermoplastics and, 96

Multi-wave oscillations, rheological properties of metallocene polyethylenes with processing aids by, 2047

Multilayer structures, PE/PP multilayers, impact fracture toughness of, 1627

N

Nafion, oriented fluorosulfonated/PTFE copolymer, structure and properties of, 272

Nakamura-Ozawa equations, for iPP and PTFE, 2194

Nanocomposites
epoxy nanocomposites modified with organoclay and rubber, morphology and performance of, 1178
epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, synthesis and characteristics of, 1170
EVA based nanocomposites, morphology of under shear and extensional flow, 1220
EVOH/clay nanocomposites produced by dynamic melt mixing, 1019
exfoliation of clays: estimation of stress for separation of two platelets, 1187
hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
injection molded microcellular PA-6 nanocomposites, 673
interface studies by electron paramagnetic resonance spectroscopy on surfactant probes, 1112
miniature mixer for, 868
NBR/organosilicate nanocomposites, mechanical, thermal, and barrier properties of, 2117
PA-66/clay, HDPE/clay, and HDPE/PA-66/clay nanocomposites, twin-screw extrusion of, 1152
PA6/MMT nanocomposites prepared by melt compounding, structure and properties of, 2070
PBT nanocomposites with different montmorillonites, preparation and characterization of, 1012
PET/montmorillonite nanocomposites, mechanical and rheological studies on, 1094
PMMA-intercalated graphite oxide/PMMA nanocomposite, 2335
polyamide 1010/montmorillonite nanocomposite, non-isothermal crystallization kinetics of, 861
polycarbonate layered-silicate nanocomposites, mechanical response and rheological properties of, 825
polymer blend nanocomposites, structure-property relationships, 1103
polyolefin-clay nanocomposites, preparation and properties of, 1027
polyolefin nanocomposites, essential work of fracture, 1142
polyolefin nanocomposites, formulation and development of, 1212
PP-clay nanocomposites, new production method, 1205
PP-clay nanocomposites, visual observation of carbon dioxide foaming of, 1004
PP/graphite nanocomposites by thermo-kinetic mixing, 1162
PP nanocomposites, exfoliation and dispersion enhancement by in-situ melt phase ultrasonication, 1773
PS magadiite nanocomposites, 1122
PS/montmorillonite nanocomposites, compounding and characterization, 1046, 1061
PS/PE/clay nanocomposites prepared by ultrasound-assisted mixing process, 1198
silica-graft ABS nanocomposites, preparation and thermal properties of, 1077
sPS/clay nanocomposites, crystallization kinetics of, 2288
Symposium editorial, 1003
thermoplastic olefin nanocomposites, extrusion processing of, 1036
thermoset rubber/layered silicate nanocomposites, recent achievements in, 1083
unsaturated polyester-clay nanocomposite synthesis using reactive organoclays, 345
vinylester resin nanocomposites with organo-modified montmorillonites: morphology, thermal, and mechanical properties of, 2041

Nanoindentation, PVC/SBR blends spatially resolved by, 609

Nanoparticles
polymerization kinetics of HEMA filled with HEMA-grafted silica preformed nanoparticles, initiation rate and, 1231
thermal stabilization of polymers and ZnO nanoparticles, 1702

Nanotube composites
polyaniline/carbon nanotube composite Schottky contacts, 28
single-walled carbon nanotubes, PP crystallization and, 303

Natural fibers
PP/woodflour composites, creep behavior of, 1594
sisal fiber reinforced PP, low-cost injection molding of, 1766
starch-based matrix composites reinforced with short sisal fibers, melt rheology of, 1907

Networks
antiplasticized thermosets: network architecture and additive chemistry and mechanical fortification by, 2125
polymer-modified asphalts (PMAs), temporary networks in, 2185
pulp fiber networks, packaging stress in, 45
semi-interpenetrating polymer networks based on PU and PVP by photopolymerization, 940

Neural networks, shrinkage and warpage prediction of injection-molded thin-wall parts using, 2029

Nitrile butadiene rubber, density and rheology in monochlorobenzene and o-dichlorobenzene solution, 88

Non-isothermal crystallization
of polyamide 1010/montmorillonite nanocomposite, crystallization kinetics, 861
of poly(ethylene phthalate-*co*-terephthalate)s, 1682

Non-woven fabric, PBT/PET conjugated fibers: melt spinning, fiber properties, and thermal bonding, 331

Nucleation, structure modification of iPP by bi-component nucleating systems, 352

Numerical modeling, microwave curing of adhesive-bonded joint, 1414

Numerical simulation
of cell growth in injection molding of microcellular plastics, 2274
die lines in plastics extrusion, 1811

Nylon
compatibilized PP/nylon-66/PS blends, impact strength and elongation-

to-break of, 1800
hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
impact-modified nylon-/ABS blends, 2340
indentation of reinforced nylons, 1439
photopolymerization of acrylamide onto calcium carbonate particle surfaces and filled nylon-6, 1277
vibration welding of nylon 6 to nylon 66, 760

O

Octene m-linear low-density polyethylene, miscibility in LDPE, rheological study of branch content and, 660
ODOPN, cresol novolac epoxy resins containing, curing and pyrolysis of, 376
Optical fiber sensors
fluorescence temperature measurements, 898
real-time monitoring of fluorescence anisotropy and temperature during processing of biaxially stretched PP film, 805
Optical media
antiplasticized polycarbonates, characteristics, 1877
birefringence prediction of, 814
Optical properties, of polyaniline doped with inorganic acids, 1676
Optical scanning, for surface texture characterization of injection molded pigmented plastics, 1615
Optimization
runner balancing by direct genetic optimization of shrinkage, 1949
of shrinkage and warpage of thin-wall parts, 917
Optoelectronics, electroactive polymer patterns with metal incorporation on a polymeric substrate, 2061
Organic-inorganic nanocomposites, hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
Organoclay. ***See*** **Clay**
Orientation
injection molded automotive TPO: multilayer composite structure of varied orientations, 1588
of oriented fluorosulfonated/PTFE copolymer, structure and properties of, 272
of PA-6 films by infrared trichroism, 231
polypropylenes, fiber and film processing of PP of varying stereoregular forms and tacticity, 210
of PVPh and blends, hydrogen bonds and, 241
Overmolding, sequential injection overmolding of elastomeric ethylene-octene copolymer on PP homopolymer core, 2110
Oxygen, processing of high-density PE melts, rheological properties and, 615

P

Packaging
digital printing on polymer-coated packaging boards, surface modification and, 2052
high barrier EVOH-based blends for food packaging, uniaxial tensile behavior and thermoforming characteristics of, 598
hot-fillable containers containing PET/PEN copolymers and blends, 1670
injection stretch-blow molding of PET bottles, non-isothermal finite element model for, 1379
stretch blow molding of PET bottles, modeling and simulation of, 1460
Packing stress, compression behavior of pulp fiber networks, 45
Paraffinic oil, solution rheology of stearyl methacrylate-co-styrene-co-vinyl pyrrolidinone (SMA-S-VP) copolymers in, 736
Parallel coextrusion, for simultaneous measurements of radial die swell and velocity profiles, 1960
Partially miscible polymers, fracture at PS/PBS partially miscible polymer interfaces, 929
Particle migration, of conductive fillers in injection molding, 2101
Particle size, of filled PMMA composites, rheological properties and, 452
Patterning, electroactive polymer patterns with metal incorporation on a polymeric substrate, 2061
Peel strength
of calcium carbonate-EMAA thermal sprayed coatings, 1448
interface of film insert injection molded polypropylene film/polypropylene matrix, 2327
Peel test, interlayer adhesion of coextruded films, biaxial stretching and, 948
Peroxide
crosslinking of EPM rubber, 131
processing of high-density PE melts, rheological properties and, 615
Perylene, for temperature gradients in channels of single-screw extruder, 2148
Pglass, inorganic-organic polymer hybrid, phase behavior of during melt processing of, 1692
Phase behavior, during melt processing of inorganic-organic polymer hybrid material, 1692
Phase transition, of thermoplastic polyurethanes by coupled rheology/DSC measurements, 1514
Photopolymerization
of acrylamide onto calcium carbonate particle surfaces and filled nylon-6, 1277
semi-interpenetrating polymer networks based on PU and PVP by, 940
Pigmented plastics
color of: measurements and predictions, 141
surface texture characterization of injection molded pigmented plastics, 1615
Pipe, predicting triaxial residual stresses in, 1828
Plasticization
of PET films drawn in hot water, 223
solid-bed break-up in plasticization of reciprocating-screw injection molding, 1313
Plasticizers
antiplasticized thermosets: network architecture and additive chemistry and mechanical fortification by, 2125
rubber plasticizers from degraded/devulcanized scrap rubber, 1338
Polyacrylamide (PAA), slot coating, effects of additives on operating windows of, 1970
Polyacrylate, water swellable rubber compatibilized by PVA-g-PBA, mechanical properties, water swelling behavior, and morphology of, 72
Polyalpha olefin (PAO4), solution rheology of stearyl methacrylate-co-styrene-co-vinyl pyrrolidinone (SMA-S-VP) copolymers in, 736
Polyamides
compatibilized PP/nylon-66/PS blends, impact strength and elongation-to-break of, 1800
functionalized PP and PA-6, *in situ* polymerization and compatibilization, 648
hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
impact-modified nylon-/ABS blends, 2340
indentation of reinforced nylons, 1439
PA-6, biaxial deformation of, 231
PA-6,6/PET blends, structure and mechanical properties of, 1405
PA-6/PA blends, structural organization and drawability, 261
PA-66/clay and HDPE/PA-66/clay nanocomposites, twin-screw extrusion of, 1152
PA6, injection molding of microcellular plastics, mathematical modeling and numerical simulation of cell growth in, 2274
PA6/LDPE blends, injection moldability and properties of, 1732
PA6/MMT nanocomposites prepared by melt compounding, structure and properties of, 2070
photopolymerization of acrylamide onto calcium carbonate particle surfaces and filled nylon-6, 1277
polyamide 1010/montmorillonite nanocomposite, non-isothermal crystallization kinetics of, 861
polyester/polyamide blends, ionomeric compatibilizers and morphology and properties of, 1721
reactive blending of functionalized PP and PA-6: *in situ* polymerization and compatibilization, 648
rubber-modified PA6, essential work of fracture on impact, 1707
vibration welding of nylon 6 to nylon 66, 760
Polyaniline
doped with inorganic acids: spectroscopic, transport, and morphological studies of, 1676
polyaniline/carbon nanotube composite Schottky contacts, 28
polyaniline-filled chain extended polyurethanes, structure-property relationship in, 772
Polybutadiene (PB), SBS block copolymer/homopolystyrene blends, morphology formation in, 1534
Poly(butyl acrylate), water swellable

rubber compatibilized by PVA-g-PBA, mechanical properties, water swelling behavior, and morphology of, 72
Poly(butylene adipate) (PBA), PBT/PBA co-poly(ester ester), environmental stress cracking in, 1319
Poly(butylene terephthalate) (PBT)
nanocomposites with different montmorillonites, preparation and characterization of, 1012
PBT/PBA co-poly(ester ester), environmental stress cracking in, 1319
PBT/PET conjugated fibers: melt spinning, fiber properties, and thermal bonding, 331
Polycaprolactone (PCL)
synthesis of new three-arm ε-PCL, kinetics and thermodynamics of, 1491
thermoplastic starch/polycaprolactone blends, rheological, mechanical, and biodegradation studies on, 1429
Polycarbonate (PC)
antiplasticized PC, characteristics of, 1877
boss and screw fasteners, axisymmetric model for thread forming, 1498
free volume changes in mechanically milled PS and PC, positron annihilation lifetime spectroscopy study, 1351
modeling of polymer melting, drop deformation, and breakup under shear flow, 1258
PC/PE blends with high interfacial contact during elongation, 1561
polycarbonate layered-silicate nanocomposites, mechanical response and rheological properties of, 825
relaxation and creep behavior of, 1783
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
Polycyclohexylene terephthalate (PCT), microstructural modifications of in uniaxially hot-drawn films, 509
Polyesters
polyester/polyamide blends, ionomeric compatibilizers and morphology and properties of, 1721
unsaturated polyester-clay nanocomposite synthesis using reactive organoclays, 345
Poly(ether ketone ketone), improvement of processability of by addition of thermotropic LCP, 541
Poly(etherimide) (PEI), biaxially blown films containing TLCP, thermal properties of, 1419
Polyethylene (PE)
branched LDPE, effects of ZnO nanoparticles on thermal stabilization of, 1702
broad-molecular-weight-distribution PEs, extrusion of, 2266
bubble instabilities in film blowing extrusion, in-line scanning camera system for, 283
elastic properties of, micromechanical model for, 433
HDPE blown film, thickness uniformity and relation to rheological properties and density, 965
HDPE/clay and HDPE/PA-66/clay nanocomposites, twin-screw extrusion of, 1152
HDPE melts, rheological behavior and processing conditions, 615
HDPE/PS/PMMA ternary blends, composite droplets with core/shell morphologies from by twin-screw extrusion, 749
in situ microfibrillar PET/PE blends, essential work of fracture of, 2165
LDPE and mPE foams, rheological properties of injected molded foams, 2158
LDPE as extrusion coating for digital printing on polymer-coated packaging boards, 2052
LDPE/PS melts, measurement of interfacial tension in melts saturated with supercritical CO_2, 18
LLDPE, biaxial stretching and structure of, 252
LLDPE, branch content and miscibility of octene m-LLDPE and ZN-LLDPE in LDPE, rheological study of, 660
LLDPE, online measurement of crystallinity with Raman spectroscopy during blown film extrusion of, 1484
MDPE, predicting triaxial residual stresses in plastic pipe, 1828
metallocene-catalyzed LDPE, synergistic effect of boron nitride on capillary extrusion processability of, 79
metallocene-catalyzed LLDPE foams for rotational molding, processing characteristics and mechanical properties of, 638
metallocene polyethylenes with processing aids, rheological evaluation by multi-wave oscillations, 2047
microcellular foamed HDPE/PP blends, cell morphology and impact strength of, 1551
micropelletization of, flow analysis, 1391
modeling of polymer melting, drop deformation, and breakup under shear flow, 1258
molten polymer: diffusion coefficient of supercritical carbon dioxide in, measurement and prediction of, 1915
PA6/LDPE blends, injection moldability and properties of, 1732
PE/ethylene-α-olefin copolymer ternary blends, thermal properties and crystallization behavior of, 1858
PE/PP multilayers, impact fracture toughness of, 1627
PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
polyolefin-clay nanocomposites, preparation and properties of, 1027
polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
pressure-volume-temperature data of PE liquids, use of to determine solubility and interaction parameters, 853
PS/PE/clay nanocomposites prepared by ultrasound-assisted mixing process, 1198
PVC/LDPE melt-blends, structural changes in, 487
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
starch-filled LDPE, tensile properties at room temperature, 1839
UHMWPE, hot isostatic pressing of, 1848
ultrahigh molecular weight PE/PP blends, sliding wear of, 197
Poly(ethylene-co-chlorotrifluoroethylene), structure and properties of, 113
Poly(ethylene-co-cyclohexylenedimethylene terephthalate) (PETG), shear field induced diffusion and molecular weight fractionation during processing, 1283
Poly(ethylene naphthalate) (PEN), hot-fillable containers containing PET/PEN copolymers and blends, 1670
Poly(ethylene 2,6-naphthalate) (PEN), PEN/PET blends, electron beam irradiation and, 395
Poly(ethylene oxide) (PEO), PEO/PS blends, detection of cocontinuity, 714
Poly(ethylene phthalate-*co*-terephthalate)s, synthesis and non-isothermal crystallization of, 1682
Poly(ethylene terephthalate) (PET)
branching of, monitoring with chemorheology, 474
characterization of films drawn in hot water, 223
as extrusion coating for digital printing on polymer-coated packaging boards, 2052
hot-fillable containers containing PET/PEN copolymers and blends, 1670
indentation of, 1439
in situ microfibrillar PET/PE blends, essential work of fracture of, 2165
injection molded, morphology and mechanical properties of, 2174
injection stretch-blow molding of PET bottles, non-isothermal finite element model for, 1379
PA-6,6/PET blends, structure and mechanical properties of, 1405
PBT/PET conjugated fibers: melt spinning, fiber properties, and thermal bonding, 331
PEN/PET blends, electron beam irradiation and, 395
PET/montmorillonite nanocomposites, mechanical and rheological studies on, 1094
PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
recycled PET chain extension by reactive extrusion, 1579
shear field induced diffusion and molecular weight fractionation during processing, 1283
stretch-blow molding of, modeling and simulation, 1460
Poly(formaldehyde), indentation of, 1439
Poly(hydroxy ester ether) (PHEE), starch-filled blends, tensile properties at room temperature, 1839
Polyimides
electroless plating of copper on fluorinated polyimide films, 362
poly(keto-ether-imide) films, uniaxial

stretching of, 1360
Poly(keto-ether-imide) films, uniaxial stretching of, 1360
Poly(L-lactide), crystallization kinetics of, 186
Polymer blends
conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755
HDPE/PS/PMMA ternary blends, composite droplets with core/shell morphologies from by twin-screw extrusion, 749
high barrier EVOH-based blends for food packaging, uniaxial tensile behavior and thermoforming characteristics of, 598
hot-fillable containers containing PET/PEN copolymers and blends, 1670
impact-modified nylon 6/ABS blends, 2340
in situ microfibrillar PET/PE blends, essential work of fracture of, 2165
LCP and carbon black-containing blends, electrical conductivity of, 528
metallocene-catalyzed atactic PP blends with bitumen, rheological aspects of, 1792
NBR/HNBR blends, miscibility and mechanical properties of, 2346
new miniature mixer for, 868
octene m-LLDPE and ZN-LLDPE miscibility in LDPE, rheological study of branch content and, 660
PA-6,6/PET blends, structure and mechanical properties of, 1405
PA6/LDPE blends, injection moldability and properties of, 1732
PE/ethylene-α-olefin copolymer ternary blends, thermal properties and crystallization behavior of, 1858
PEN/PET blends, electron beam irradiation and, 395
PEO/PS blends, detection of cocontinuity, 714
PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
polyester/polyamide blends, ionomeric compatibilizers and morphology and properties of, 1721
poly(ether ketone ketone), improvement of processability of by addition of thermotropic LCP, 541
polymer blend nanocomposites, structure-property relationships, 1103
polyurethane rubber, improved properties of ultrasonically treated unfilled blend, 794
PP and PA-6, *in situ* polymerization and compatibilization of functionalized blends, 648
PP/EPDM blends, effect of ultrasound on extrusion: structure and mechanical properties, 1509
PP/EPDM blends, *in situ* ultrasonic compatibilization of, 2019
PP/nylon-66/PS blends, impact strength and elongation-to-break of compatibilized blends, 1800
PP/ultra-low-density ethylene-α-olefin copolymer blends, rotational molding of, 1662
PVC/LDPE melt-blends, structural changes in, 487
PVC/SBR blends spatially resolved by nanoindentation technique, micromechanical properties on surface of, 609
PVPh and blends, orientation of and hydrogen bonds, 241
SBS block copolymer/homopolystyrene blends, morphology formation in, 1534
starch-filled PE, tensile properties at room temperature, 1839
of thermoplastic starch and polycaprolactone, rheological, mechanical, and biodegradation studies on, 1429
TPU/SAN blends, morphology, thermal and thermo-mechanical properties and, 838
UHMWPE/PP blends, sliding wear of, 197
Polymer-gas solutions, bubble nucleation and growth in, 1890
Polymer melts
bubble removal in rotational molding, 388
butane and isobutane solubility in molten PP and PS, 2083
diffusion coefficients of supercritical carbon dioxide in molten polymers, measurement and prediction of, 1915
exfoliation of clays: estimation of stress for separation of two platelets, 1187
HDPE blown film, rheological properties and density and, 965
heat transfer behavior of melting polymers in laminar flow field, 423
high-density PE melts, rheological behavior and processing conditions, 65
modeling of melting, drop deformation, and breakup under shear flow, 1258
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
PS/LDPE melts saturated with supercritical CO_2, measurement of interfacial tension in, 18
PVC/LDPE melt-blends, structural changes in, 487
PVC melts, shear rate and wall slip velocity functions of, 153
quiescent crystallization, modeling of, 123
radial extrudate swell and velocity of flowing PS melt in electro-magnetized die of, 2298
shear and elongational viscosities of, effect of pressure on, 1328
temperature controllers for injection molding, 2308, 2318
temperature gradients in channels of single-screw extruder, 2148
three-dimensional polymer flow in calendar bank, 1642
Polymer-modified asphalts (PMAs), temporary networks in, 2185
Polymer networks, semi-interpenetrating polymer networks based on PU and PVP, structure-property relationships and bacterial adhesion, 940
Polymer solutions, bubble nucleation and growth in, 1890
Polymerization kinetics, of HEMA filled with HEMA-grafted silica preformed nanoparticles, initiation rate and, 1231
Poly(methyl methacrylate) (PMMA)
HDPE/PS/PMMA ternary blends, composite droplets with core/shell morphologies from by twin-screw extrusion, 749
PMMA-intercalated graphite oxide/PMMA nanocomposite, 2335
rheology of filled PMMA composites, effect of particle size on, 452
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
Polyolefin plastomers
multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
ultra-low-density ethylene-α-olefin copolymers, rotational molding characteristics and molecular structure of, 496
Polyolefins
erucamide in polyamide films at elevated temperature, 2247
injection molded automotive TPO: multilayer composite structure of varied orientations, 1588
polyolefin-clay nanocomposites, preparation and properties of, 1027
polyolefin nanocomposites, essential work of fracture analysis, 1142
polyolefin nanocomposites, formulation and development of, 1212
stress relaxation in low-shrink-force polyolefin films, 1716
ternary blends, thermal properties and crystallization behavior of, 1858
Ziegler-Natta thermoplastic polyolefins, peroxide crosslinking of, 131
Polyphenylene sulfide (PS), conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755
Polypropylene (PP)
alternating poly(propylene carbonate) copolymer, essential work of fracture analysis for compression molded alternating PPC, 580
boss and screw fasteners, axisymmetric model for thread forming, 1498
butane and isobutane solubility in molten PP, 2083
cast PP, flow-induced morphology of, 1656
compatibilized PP/nylon-66/PS blends, impact strength and elongation-to-break of, 1800
conductive thermoplastic blends for injection and compression molding of bipolar plates in fuel cell applications, 1755
constitutive equations for viscoplastic response of iPP in cyclic tests and strain rate, 548
crystallization and orientation development in fiber and film processing of, 210
crystallization behavior of, effect of carbon nanotubes on, 303
crystallization behavior of, molecular structure and, 1749
diffusion coefficient of supercritical car-

bon dioxide in molten polymer, measurement and prediction of, 1915
extrusion foaming, strain hardening in, 2090
filler dispersion and morphology of, 880
functionalized PP and PA-6, *in situ* polymerization and compatibilization, 648
heat transfer coefficient of melting polymer in laminar flow field, 423
hydrosilylated polypropylenes, surface characteristics of, 56
injection molded automotive TPO: multilayer composite structure of varied orientations, 1588
interface of film insert injection molded polypropylene-film/polypropylene matrix, mechanical and morphological properties of, 2327
iPP crystallization kinetics, master quotients, master curves, and Nakamura-Ozawa equations, 2194
metallocene-catalyzed atactic PP blends with bitumen, rheological aspects of, 1792
microcellular foamed HDPE/PP blends, cell morphology and impact strength of, 1551
microwave heating of single lap adhesive-bonded PP joint, 728
PE/ethylene-α-olefin copolymer ternary blends, thermal properties and crystallization behavior of, 1858
PE/PP multilayers, impact fracture toughness of, 1627
polyolefin nanocomposites, essential work of fracture analysis, 1142
polyolefin nanocomposites, formulation and development of, 1212
PP-clay nanocomposites, new production method for, 1205
PP-clay nanocomposites, visual observation of carbon dioxide foaming of, 1004
PP/EPDM blend nanocomposites, structure-property relationships, 1103
PP/EPDM blends, effect of ultrasound on extrusion: structure and mechanical properties, 1509
PP/EPDM blends, *in situ* ultrasonic compatibilization of, 2019
PP/graphite nanocomposites by thermo-kinetic mixing, 1162
PP nanocomposites, exfoliation and dispersion enhancement by in-situ melt phase ultrasonication, 1773
PP/ultra-low-density ethylene-α-olefin copolymer blends, rotational molding of, 1662
PP/woodflour composites, creep behavior of, 1594
processability of in thermoforming, effect of long chain branching on, 973
real-time monitoring of fluorescence anisotropy and temperature during processing of biaxially stretched PP film, 805
sequential injection overmolding of elastomeric ethylene-octene copolymer on PP homopolymer core, 2110
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
sisal fiber reinforced PP, low-cost injection molding of, 1766
structure modification of iPP by bi-component nucleating systems, 352
ultrahigh molecular weight PE/PP blends, sliding wear of, 197

Poly(propylene carbonate), poly(propylene carbonate)/starch composites, preparation and properties of, 2134

Polypropylene-graft-maleic anhydride, removal of ungrafted monomer from via supercritical carbon dioxide extraction, 1636

Polystyrene (PS)
butane and isobutane solubility in molten PS, 2083
compatibilized PP/nylon-66/PS blends, impact strength and elongation-to-break of, 1800
crosslinked epoxy fibrillar morphology in PS continuous phase by reactive extrusion, 625
diffusion coefficient of supercritical carbon dioxide in molten polymer, measurement and prediction of, 1915
elastic properties of, micromechanical model for, 433
electrical conductivity of high-impact PS blends with LCP and carbon black, 528
free volume changes in mechanically milled PS and PC, positron annihilation lifetime spectroscopy study, 1351
HDPE/PS/PMMA ternary blends, composite droplets with core/shell morphologies from by twin-screw extrusion, 749
heat transfer coefficient of melting polymer in laminar flow field, 423
inorganic-organic polymer hybrid, phase behavior of during melt processing of, 1692
interfacial tension in PS/LDPE melts saturated with supercritical CO_2, 18
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
partially miscible polymer interfaces: fracture behavior at, 929
PEO/PS blends, detection of cocontinuity, 714
PS magadiite nanocomposites, 1122
PS/montmorillonite nanocomposites, compounding and characterization, 1046, 1061
PS/PBS partially miscible polymer interfaces: fracture behavior at, 929
PS/PE/clay nanocomposites prepared by ultrasound-assisted mixing process, 1198
radial extrudate swell and velocity of flowing PS melt in electro-magnetized die of, 2298
reactively extruded PVC/PS blends, 1473
SBS block copolymer/homopolystyrene blends, morphology formation in, 1534
shear and elongational viscosities of polymer melts, effect of pressure on, 1328
sPS/clay nanocomposites, crystallization kinetics of, 2288
strain-gradient yielding in PS and molecular weight, 1987
structure development in melt-spinning syndiotactic PS compared to atactic PS, 2141

Poly(styrene-*r*-4-bromostyrene) (PBS), PS/PBS partially miscible polymer interfaces: fracture behavior at, 929

Polytetrafluoroethylene (PTFE)
cold forging method for microfabrication, 1998
crystallization kinetics, master quotients, master curves, and Nakamura-Ozawa equations, 2194
oriented fluorosulfonated/PTFE copolymer, structure and properties of, 272
simulation of sintering: thermal stresses and deformation behavior, 1368

Polyurethane rubber, blends of ultrasonically treated unfilled polyurethane rubber, improved properties of, 794

Polyurethanes
barium sulfate-filled medical-grade TPU, rheology and processing of, 1941
curing kinetics and chemorheological analysis during formation, 518
as foams, determination of effective diffusion coefficient of blowing agents in, 2229
reacting polyurethane foams from soy oil, viscoelastic changes and cell opening of, 1977
semi-interpenetrating polymer networks based on, 940
structure-property relationship in Pani-filled chain extended PUs, 772
thermoplastic polyurethane polymerization, rheo-kinetic measurement of in measurement kneader, 1648
thermoplastic polyurethanes, phase transition behavior of by coupled rheology/DSC measurements, 1514
TPU/SAN blends, morphology, thermal and thermo-mechanical properties and, 838

Poly(vinyl alcohol), water swellable rubber compatibilized by PVA-g-PBA, mechanical properties, water swelling behavior, and morphology of, 72

Poly(vinyl chloride) (PVC)
core-shell impact modifier shell thickness, effect on toughening PVC, 1885
degradation during injection molding in rectangular channel, computational prediction of, 1295
PVC/LDPE melt-blends, structural changes in, 487
PVC/SBR blends spatially resolved by nanoindentation technique, micromechanical properties on surface of, 609
reactively extruded PVC/PS blends, 1473
shear rate and wall slip velocity functions of PVC melts, 153

Poly(vinyl phenol) (PVPh), orientation of PVPh and blends, hydrogen bonds and, 241

Poly(vinyl pyrrolidone) (PVP), semi-interpenetrating polymer networks

based on, 940
Poly(vinylidene fluoride), structure and properties of, 113
Positron annihilation lifetime spectroscopy (PALS), free volume changes in mechanically milled PS and PC by, 1351
Pressure, shear and elongational viscosities of polymer melts, effect of on, 1328
Pressure-volume-temperature data
of PE liquids, use of to determine solubility and interaction parameters, 853
PS/montmorillonite nanocomposites, compounding and characterization, 1046
Profile extrusion, calibrator design, 2216
Pulp fiber networks, compression behavior of, 45
Pyrolysis, of cresol novolac epoxy resins, 376
Pyromellitic dianhydride (PMDA), for chain extension in recycled PET, 1579

Q

Quasi-cylindrical model, of blown film extrusion, comparison of with dynamic thin shell model for, 1267
Quiescent crystallization, of polymer melts, modeling of, 123

R

Radial die swell
in electro-magnetized die of extrusion rheometer, 2298
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
Raman spectroscopy, online measurement of LLDPE crystallinity with during blown film extrusion of, 1484
Reactive blending, of functionalized PP and PA-6: *in situ* polymerization and compatibilization, 648
Reactive extrusion
fibrillar morphology of crosslinked epoxy in PS continuous phase by, 625
of PVC/PS blends, 1473
recycled PET chain extension by, 1579
Reactive melt modification, PET branching, monitoring with chemorheology, 474
Reciprocating-screw injection molding, solid-bed break-up in plasticization, modeling of, 1313
Recycling
microcellular foamed HDPE/PP blends, cell morphology and impact strength of, 1551
PET chain extension by reactive extrusion, 1579
rubber plasticizers from degraded/devulcanized scrap rubber, 1338
Relaxation, of polycarbonate, 1783
Residual stresses, in plastic pipes, predicting triaxial stresses, 1828
Rheo-kinetics, of thermoplastic polyurethane polymerization in measurement kneader, 1648
Rheological analysis
miscibility of octene m-LLDEP and ZN-LLDPE in LDPE, branch content and, 660
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
PEO/PS blends, comparison of methods for detection of cocontinuity, 714
PET branching, monitoring with, 474
thermoplastic polyurethanes, phase transition behavior by coupled rheology/DSC measurements, 1514
Rheological properties
of barium sulfate-filled medical-grade TPU, 1941
of blends of ultrasonically treated unfilled polyurethane rubber, 794
of EVA based nanocomposites under shear and extensional flow, 1220
of filled PMMA composites, effect of particle size on, 452
of HDPE blown film, thickness uniformity and, 965
of HDPE melts, processing conditions and, 615
of impact-modified nylon 6/ABS blends, 2340
of injection molded LDPE and mPE foams, 2158
of metallocene-catalyzed atactic PP blends with bitumen, 1792
of metallocene polyethylenes with processing aids, 2047
of nitrile butadiene rubber in monochlorobenzene and o-dichlorobenzene solution, 88
of PET/montmorillonite nanocomposites, 1094
of polycarbonate layered-silicate nanocomposites, 825
of polyurethane during formation, 518
of PS/montmorillonite nanocomposites, 1061
of PVPh and blends, orientation of and hydrogen bonds, 241
of reactively extruded PVC/PS blends, 1473
of rubber-modified thermoplastics, surface gloss and, 96
of starch-based matrix composites reinforced with short sisal fibers, melt rheology of, 1907
of stearyl methacrylate-co-styrene-co-vinyl pyrrolidinone (SMA-S-VP) copolymers, solution rheology of in paraffinic base oil, 736
of thermoplastic starch/polycaprolactone blends, 1429
of thermoset rubber/layered silicate nanocomposites, 1083
Rheometer
helical barrel rheometer to study bulk free radical polymerization, 179
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
radial extrudate swell and velocity profiles of flowing PS melt in electromagnetized die of extrusion rheometer, 2298
Rotational molding
bubble removal in, 388
metallocene-catalyzed LLDPE foams for, processing characteristics and mechanical properties of, 638
of PP/ultra-low-density ethylene-α-olefin copolymer blends, 1662
of ultra-low-density ethylene-α-olefin copolymers, molecular structure of and molding characteristics, 496
Rubber
blends of ultrasonically treated unfilled polyurethane rubber, improved properties of, 794
dispersion, temperature, and torque models for mixing carbon black with rubber, 1247
epoxy nanocomposites modified with organoclay and rubber, morphology and performance of, 1178
NBR/HNBR blends, miscibility and mechanical properties of, 2346
NBR/organosilicate nanocomposites, mechanical, thermal, and barrier properties of, 2117
nitrile butadiene rubber, density and rheology in monochlorobenzene and o-dichlorobenzene solution, 88
plasticizers from degraded/devulcanized scrap rubber, 1338
PP/EPDM blends, *in situ* ultrasonic compatibilization of, 2019
rubber-modified PA6, essential work of fracture on impact, 1707
swellable rubber compatibilized by PVA-g-PBA, mechanical properties, water swelling behavior, and morphology of, 72
thermoset rubber/layered silicate nanocomposites, recent achievements in, 1083
two-component transfer molding: interface evolution and penetration behavior, 687, 697
Rubber-modified thermoplastics, surface gloss variation and morphological and rheological behavior and, 96
Runner balancing, by direct genetic optimization of shrinkage, 1949

S

Sandwich transfer molding, interface evolution and penetration behavior, 687, 697
SBS triblock copolymers, of SBS block copolymer/homopolystyrene blends, morphology formation in, 1534
Scanning electron microscopy (SEM), PEO/PS blends, comparison of methods for detection of cocontinuity, 714
Schottky diodes, polyaniline/carbon nanotube composite Schottky contacts, 28
Scrap rubber, plasticizers from degraded/devulcanized scrap rubber, 1338
Scratch deformation, wollastonite-containing ethylene-propylene copolymer composites, 1738
Self-similar mixing structures, chaotic mixer design and morphology in immiscible polymer systems, 407
Semi-interpenetrating polymer networks, based on PU and PVP, structure-property relationships and bacterial adhesion, 940
Semicrystalline materials
high barrier EVOH-based blends for food packaging, uniaxial tensile behavior and thermoforming char-

acteristics, 598
thermoplastic polymers, micromechanical model for elastic properties of, 433
Sequential injection overmolding, of elastomeric ethylene-octene copolymer on PP homopolymer core, 2110
Shear flow
of high-density PE melts, processing conditions and, 615
morphology of EVA based nanocomposites under, 1220
of PS nanocomposites, 1061
Shear-induced migration, of conductive fillers in injection molding, 2101
Shear rate, of PVC melts based on slit die viscometry, 153
Shear viscosity, of polymer melts, effect of pressure on, 1328
Sheath/core conjugated fibers, PBT/PET conjugated fibers: melt spinning, fiber properties, and thermal bonding, 331
Sheet formation, three-dimensional polymer flow in calendar bank, 1642
Shell thickness, toughening of PVC and, 1885
Shrink films, LLDPE/EVA copolymer films, stress relaxation in, 1716
Shrinkage
monitoring of temperature decay of polymer streams during injection molding, 955
runner balancing by direct genetic optimization of shrinkage, 1949
of thin-wall parts, optimization of, 917
of thin-wall parts, prediction of using artificial neural networks, 2029
Silica
polyolefin plastomer multilayer films, effect of erucamide and silica loadings on coefficient of friction in repetitive testing, 34
silica filler and dynamic mechanical thermal properties of ethylene-octene copolymer, 163
Silicate nanocomposites
epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, synthesis and characteristics of, 1170
hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
NBR/organosilicate nanocomposites, mechanical, thermal, and barrier properties of, 2117
PA6/MMT nanocomposites prepared by melt compounding, structure and properties of, 2070
polycarbonate layered-silicate nanocomposites, mechanical response and rheological properties and, 825
polymerization kinetics of HEMA filled with HEMA-grafted silica preformed nanoparticles, initiation rate and, 1231
silica-graft ABS nanocomposites, preparation and thermal properties of, 1077
thermoset rubber/layered silicate nanocomposites, recent achievements in, 1083
Simulation
birefringence prediction of optical media, 814
of cell growth in injection molding of microcellular plastics, 2274
die lines in extrusion: film blowing experiments, 1811
gas-assisted injection molding, primary and secondary gas penetration during, 983, 992
injection molding of micro-optic components, 564
injection molding with microstructures, flow and heat transfer simulation of, 1866
microwave curing of adhesive-bonded joint, 1414
microwave heating of single lap adhesive-bonded PP joint, 728
PTFE sintering: thermal stresses and deformation behavior, 1368
solids transport in single-screw extruder, using 3-D discrete particle simulation, 2203
stretch-blow molding of PET bottles, 1460
two-component transfer molding: interface evolution and penetration behavior, 687, 697
Single-screw extrusion
of barium sulfate-filled medical-grade TPU, 1941
of PP, filler dispersion and PP morphology, 880
solids transport in using 3-D discrete particle simulation, 2203
temperature gradients in channels of single-screw extruder, 2148
Single-walled carbon nanotubes, PP crystallization and, 303
Sintering, of PTFE, simulation of, 1368
Sisal
sisal fiber reinforced PP, low-cost injection molding of, 1766
starch-based matrix composites reinforced with short sisal fibers, melt rheology of, 1907
Sliding wear, of ultrahigh molecular weight PE/PP blends, 197
Slip velocity, of PVC melts based on slit die viscometry, 153
Slit die viscometry, shear rate and wall slip velocity functions of PVC melts based on, 153
Slot coating, effects of polymer additives on operating windows of, 1970
Small angle neutron scattering (SANS), pressure-volume-temperature data of PE liquids to determine solubility and interaction parameters, 853
Solid-bed break-up, in plasticization of reciprocating-screw injection molding, modeling of, 1313
Solubility
of butane and isobutane in molten PP and PS, 2083
pressure-volume-temperature data of PE liquids to determine, 853
of supercritical carbon dioxide in molten polymers, measurement and prediction of diffusion coefficients of, 1915
Solution hydrogenation, of nitrile butadiene rubber in monochlorobenzene and o-dichlorobenzene solution, 88
Solvent extraction, PEO/PS blends, comparison of methods for detection of cocontinuity, 714
Soy oil, reacting polyurethane foams from soy oil, viscoelastic changes and cell opening of, 1977
Starch
poly(propylene carbonate)/starch composites, preparation and properties of, 2134
starch-based matrix composites reinforced with short sisal fibers, melt rheology of, 1907
ternary composites filled with, tensile properties at room temperature, 1839
Stearyl methacrylate-co-styrene-co-vinyl pyrrolidinone (SMA-S-VP) copolymers, solution rheology of in paraffinic base oil, 736
Steel fiber/ABS composites, for use in electronic and microwave devices, 588
Strain gradients, strain-gradient yielding in PS and molecular weight, 1987
Strain hardening, in PP and extrusion foaming, 2090
Strain rate, constitutive equations for viscoplastic response of iPP in cyclic tests and, 548
Stress, exfoliation of clays: estimation of stress for separation of two platelets, 1187
Stress cracking, in PBT/PBA copoly(ester ester), environmental stress cracking, 1319
Stress relaxation
in low-shrink-force polyolefin films, 1716
of polycarbonate, 1783
Stress-strain relations
of high barrier EVOH-based blends for food packaging, 598
viscoplastic response of iPP in cyclic tests, constitutive equations and strain rate, 548
Stretch-blow molding
of PET bottles, modeling and simulation, 1460
of PET bottles, non-isothermal finite element model for, 1379
Stretching, uniaxial stretching of poly(keto-ether-imide) films, 1360
Structural foams, foams under large deformations, phenomenological constitutive model of, 463
Styrene-butadiene rubber (SBR)
PVC/SBR blends spatially resolved by nanoindentation technique, micromechanical properties on surface of, 609
two-component transfer molding: interface evolution and penetration behavior, 687, 697
Styrene-co-acrylonitrile (SAN), TPU/SAN blends, morphology, thermal and thermo-mechanical properties and, 838
Supercritical carbon dioxide
diffusion coefficients of in molten polymers, measurement and prediction of, 1915
measurement of interfacial tension in PS/LDPE melts saturated with, 18
Supercritical fluid extraction, graft copolymerization, removal of un-

grafted monomer via supercritical carbon dioxide extraction, 1636
Surface characteristics, of hydrosilylated polypropylenes, 56
Surface gloss, on rubber-modified thermoplastics, morphological and rheological behavior and, 96
Surface hardness, of polyaniline-filled chain extended PUs, structure and, 772
Surface modification
digital printing on polymer-coated packaging boards and, 2052
fluorinated polyimide films modified by surface graft copolymerization with 1-vinylimidazole and 4-vinylpyridine, 362
Surface morphology, wollastonite-containing ethylene-propylene copolymer composites, 1738
Surface texture
color of pigmented plastics and, 141
of injection molded pigmented plastics, 1615
Surface treatment, photopolymerization of acrylamide onto calcium carbonate particle surfaces and filled nylon-6, 1277
Surfactant layer, interface studies in polymer-clay nanocomposites by electron paramagnetic resonance spectroscopy, 1112
Swellable rubber, compatibilized by PVA-g-PBA, mechanical properties, water swelling behavior, and morphology of, 72
Symposium on Films and Fibers (Industrial Materials Institute, National Research Council of Canada), 209-302
Syndiotactic polypropylene (sPP), crystallization and orientation development in fiber and film processing of, 210
Syndiotactic polystyrene (sPS)
elastic properties of, micromechanical model for, 433
sPS/clay nanocomposites, crystallization kinetics of, 2288
structure development in melt-spinning atactic PS compared to syndiotactic PS, 2141

T

Telecommunications applications, polymeric composites for use in electronic and microwave devices, 588
Temperature, models for in internal mixer, 1247
Temperature control, of injection molding, 2308, 2318
Temperature gradients, in channels of single-screw extruder, 2148
Tensile elongation-to-break, of compatibilized PP/nylon-66/PS blends, 1800
Tensile mechanical properties, of reactively extruded PVC/PS blends, 1473
Tensile modulus
of PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
of sisal fiber reinforced PP, 1766
Tensile properties
of epoxy nanocomposites modified with organoclay and rubber, 1178
of nylon 6 vibration welded to nylon 66, 760
of oriented fluorosulfonated/PTFE copolymer, structure and properties of, 272
of PA6/MMT nanocomposites prepared by melt compounding, 2070
of PET/PE and PC/PE blends with high interfacial contact during elongation, 1561
of polymer blend nanocomposites, structure-property relationships, 1103
of polyolefin nanocomposites, essential work of fracture analysis, 1142
of starch-filled ternary composites, 1839
of wollastonite-containing ethylene-propylene copolymer composites, scratch deformation of, 1738
Tensile strength
of calcium carbonate-EMAA thermal sprayed coatings, 1448
of PA6/MMT nanocomposites prepared by melt compounding, 2070
of polyaniline-filled chain extended PUs, structure and, 772
Ternary blends
composite droplets with core/shell morphologies from HDPE/PS/PMMA ternary blends by twin-screw extrusion, 749
polyolefin ternary blends, thermal properties and crystallization behavior of, 1858
PP/nylon-66/PS blends, impact strength and elongation-to-break of, 1800
starch-filled composites, tensile properties at room temperature, 1839
Thermal bonding, of PBT/PET conjugated fibers, 331
Thermal degradation
of PVC during injection molding in rectangular channel, computational prediction of, 1295
of PVC/LDPE melt-blends, structural changes in, 487
Thermal properties
of biaxially blown PEI films containing TLCP, 1419
of compatibilized TPU/SAN blends, 838
of cresol novolac epoxy resins, 376
of epoxy-phenolic novolac-montmorillonite hybrid nanocomposites, 1170
of EVOH/clay nanocomposites produced by dynamic melt mixing, 1019
of hot-fillable containers containing PET/PEN copolymers and blends, 1670
of NBR/organosilicate nanocomposites, 2117
of PA-6/PA blends, structural organization and drawability of, 261
of PBT/PET conjugated fibers, 331
of PE/ethylene-α-olefin copolymer ternary blends, 1858
of polyaniline doped with inorganic acids, spectroscopic, transport, and morphological studies of, 1676
of polyester/polyamide blends, ionomeric compatibilizers and, 1721
of poly(propylene carbonate)/starch composites, 2134
of PS/PE/clay nanocomposites prepared by ultrasound-assisted mixing process, 1198
of silica-graft ABS nanocomposites, 1077
of sisal fiber reinforced PP, 1766
of thermoplastic starch/polycaprolactone blends, 1429
of thermoset rubber/layered silicate nanocomposites, 1083
of UHMWPE processed by hot isostatic pressing, 1848
of vinylester resin nanocomposites with organo-modified montmorillonites, 2041
Thermal spray, calcium carbonate-EMAA thermal sprayed coatings, mechanical and erosion properties of, 1448
Thermal stability, of PA-6,6/PET blends, 1405
Thermal stabilization, ZnO nano particles and, 1702
Thermal stresses, in PTFE sintering, simulation of, 1368
Thermo-kinetic mixing, PP/graphite nanocomposites by, 1162
Thermo-mechanical properties, of compatibilized TPU/SAN blends, 838
Thermodynamics
quiescent crystallization of polymer melts, modeling of, 123
three-arm poly(ε-caprolactone) synthesis, 1491
Thermoforming
high barrier EVOH-based blends for food packaging, 598
interlayer adhesion of coextruded films, biaxial stretching and, 948
of PP, long chain branching and processability of, 973
Thermomechanical environment, mechanical properties of injection moldings and, 1522
Thermoplastic composites, for use in electronic and microwave devices, 588
Thermoplastic olefins (TPO)
extrusion processing of TPO nanocomposites, 1036
injection molded automotive TPO: multilayer composite structure of varied orientations, 1588
Ziegler-Natta thermoplastic polyolefins, peroxide crosslinking of, 131
Thermoplastic polyurethane
barium sulfate-filled medical-grade TPU, rheology and processing of, 1941
phase transition behavior of by coupled rheology/DSC measurements, 1514
polymerization in measurement kneader, rheo-kinetic measurement of, 1648
TPU/SAN blends, morphology, thermal and thermo-mechanical properties and, 838
Thermoplastic starch, polycaprolcatone/thermoplastic starch blends, rheological, mechanical, and biodegradation studies on, 1429
Thermoplastic vulcanizates (TPV), polymer blend nanocomposites,

structure-property relationships, 1103
Thermoplastics
elastic properties of semicrystalline thermoplastic polymers, micromechanical model for, 433
rubber-modified, surface gloss variation and morphological and rheological behavior and, 96
TPU/SAN blends, morphology, thermal and thermo-mechanical properties and, 838
Thermoset polymers
antiplasticized thermosets: network architecture and additive chemistry and mechanical fortification by, 2125
thermoset rubber/layered silicate nanocomposites, recent achievements in, 1083
Thermotropic liquid crystalline polymer (TLCP)
biaxially blown PEI films containing, thermal properties of, 1419
poly(ether ketone ketone) processability and, 541
Thickness, HDPE blown film, rheological properties and density and, 965
Thin-shell model, of blown film extrusion, comparison of with quasi-cylindrical models for, 1267
Thin-wall parts
shrinkage and warpage, optimization of, 917
shrinkage and warpage prediction using artificial neural networks, 2029
Thread forming, PC and PP boss and screw fasteners, axisymmetric model for, 1498
Time-scale approach, for analysis of coalescence in processing flows, 2254
Torque, models for in internal mixer, 1247
Toughening, PVC, core-shell impact modifier shell thickness and, 1885
Transesterification, electron beam irradiation of PEN/PET blends, 395
Transfer molding, two-component transfer molding: interface evolution and penetration behavior, 687, 697
Transport properties
gas-assisted injection molding, primary and secondary gas penetration during, 983, 992
hybrid organic inorganic nylon-6/SiO_2 nanocomposites, transport properties of, 1240
of polyaniline doped with inorganic acids, 1676
solids transport in single-screw extruder, 2203
Triaxial residual stresses, in plastic pipes, predicting, 1828
Triblock copolymers, of SBS block copolymer/homopolystyrene blends, morphology formation in, 1534
Trommsdorff effect, helical barrel rheometer to study bulk free radical polymerization, 179
Tubular blown film extrusion, of polypropylenes, crystallization and orientation development in, 210
Twin-screw extrusion
of barium sulfate-filled medical-grade TPU, 1941
HDPE/PS/PMMA ternary blends, composite droplets with core/shell morphologies from, 749
intermeshing co-rotating twin-screw extruders: particle trajectories, residence times, and flow behavior of kneading discs in, 779
of PA-66/clay, HDPE/clay, and HDPE/PA-66/clay nanocomposites, 1152
PP-clay nanocomposites, new production method, 1205
of PP, filler dispersion and PP morphology, 880
of PVC/PS blends, 1473
Two-stage sequential overmolding, of elastomeric ethylene-octene copolymer on PP homopolymer core, 2110

U

Ultra-low-density ethylene-α-olefin copolymers
PP blend with, rotational molding of, 1662
rotational molding characteristics and molecular structure of, 496
Ultrahigh molecular weight polyethylene (UHMWPE)
hot isostatic pressing of, 1848
UHMWPE/PP blends, sliding wear of, 197
Ultrasound
PP/EPDM blends, *in situ* ultrasonic compatibilization of, 2019
PP nanocomposites, exfoliation and dispersion enhancement by in-situ melt phase ultrasonication, 1773
Ultrasound-assisted mixing, PS/PE/clay nanocomposites prepared by, 1198
Ultrasound irradiation, of PP/EPDM blend extrusion, 1509
Uniaxial drawing, polycyclohexylene terephthalate (PCT), microstructural modifications of in uniaxially hot-drawn films, 509
Uniaxial stretching, of poly(keto-ether-imide) films, 1360
Uniaxial tensile characteristics, of high barrier EVOH-based blends for food packaging, 598
Unsaturated polyester resins, unsaturated polyester-clay nanocomposite synthesis using reactive organoclays, 345

V

Velocity profiles
in electro-magnetized die of extrusion rheometer, 2298
parallel coextrusion for simultaneous measurements of radial die swell and velocity profiles, 1960
Vibration welding, of nylon 6 to nylon 66, 760
Vinyl pyrrolidinone-styrene-stearyl methacrylate (VP-S-SMA) copolymers, solution rheology of in paraffinic base oil, 736
Vinylester resin, nanocomposites with organo-modified montmorillonites: morphology, thermal, and mechanical properties of, 2041
1-Vinylimidazole (VIDz), fluorinated polyimide films modified by surface graft copolymerization with, 362
4-Vinylpyridine (4VP), fluorinated polyimide films modified by surface graft copolymerization with, 362
Virtual sensing, for monitoring injection molding, 1605
Viscoelastic properties
of PET/montmorillonite nanocomposites, 1094
of polycarbonate layered-silicate nanocomposites, 825
of PS/montmorillonite nanocomposites, 1061
of reacting polyurethane foams from soy oil, 1977
of thermoplastic starch/polycaprolactone blends, 1429
of vinylester resin nanocomposites with organo-modified montmorillonites, 2041
Viscoplastic response, of iPP in cyclic tests, constitutive equations for and strain rate, 548
Viscosity
of high-density PE melts, processing conditions and, 615
of nitrile butadiene rubber in monochlorobenzene and o-dichlorobenzene solution, 88
Viscosity functions, temporary networks in polymer-modified asphalts (PMAs), 2185
Viscosity index, stearyl methacrylate-co-styrene-co-vinyl pyrrolidinone (SMA-S-VP) copolymers in paraffinic base oil, 736

W

Wall shear stress, of PVC melts based on slit die viscometry, 153
Warpage
of thin-wall parts, optimization of, 917
of thin-wall parts, prediction of using artificial neural networks, 2029
Waste rubber, rubber plasticizers from degraded/devulcanized scrap rubber, 1338
Water swelling, of swellable rubber compatibilized by PVA-g-PBA, 72
Wear, ultrahigh molecular weight PE/PP blends, sliding wear, 197
Welding, vibration welding of nylon 6 to nylon 66, 760
Wettability, surface characteristics of hydrosilylated polypropylenes, 56
Wollastonite-containing ethylene-propylene copolymer composites, scratch deformation of, 1738
Woodflour, PP/woodflour composites, creep behavior of, 1594

Y

Yield strength, of epoxy nanocomposites modified with organoclay and rubber, 1178
Young's modulus, of PA-6,6/PET blends, 1405

Z

Ziegler-Natta linear low-density polyethylene
miscibility in LDPE, rheological study of branch content and, 660
polyolefin-clay nanocomposites, preparation and properties of, 1027
Ziegler-Natta thermoplastic polyolefins, peroxide crosslinking of, 131
ZnO nanoparticles, thermal stabilization of polymers and, 1702

Author Index

Abu Sharkh, B. F., 2346
Acierno, D., 1012
Adhikari, R., 1534
Ajji, A., 209, 252
Alam, K., 1949
Alonso, C., 2110
Alvarez, V. A., 1907
Alves, N. M., 2174
Amendola, E., 1012
Andena, L., 1368
Aranguren, M. I., 1594
Archer, E., 638
Areerat, S., 1915
Ariño, I., 141, 1615
Armstrong, C. G., 1379
Artzi, N., 1019
Arzondo, L. M., 1766, 2110
Auger, J., 252
Awaja, F., 1579

Bacci, D., 131
Baird, R. J., 1773
Bakker, A., 1319
Bakker, H., 1351
Balakrishnan, S., 1429, 1491
Barka'ai, Y., 1670
Barros, G. G., 1615
Barsema, J., 1240
Bates, P. J., 760
Bauer, D. R., 1498
Baugh, D. W., 2148
Bechtel, S. E., 312
Benabdallah, H. S., 1439
Bendada, A., 955
Bergman, G., 113
Bernal, C., 1707
Berndt, C. C., 1448
Beyer, F. L., 825
Bhattacharya, M., 1977
Bhattacharya, S. N., 1220
Bhowmick, A. K., 163
Biagiotti, J., 303, 909
Bigio, D. I., 557
Billon, N., 1522
Biondi, D., 2185
Blank, D. H. A., 1240
Blythe, C., 1588
Bobovitch, A. L., 1716
Boldizar, A., 1328
Boot, J. C., 1828
Borisenkova, E., 615
Braatz, R. D., 1267
Bravo, V. L., 779
Breuer, O., 868
Brisson, J., 241
Brucato, V., 1
Bui, V. T., 1439
Bur, A. J., 805, 898, 2148
Bureau, M. N., 1142, 1212
Bushko, W. C., 814
Buzanowski, W. C., 2148

Cabedo, L., 598
Caflisch, G. B., 1283
Cai-Yuan, P., 2335
Calderas, F., 1094
Campanelli, J. R., 1247
Canfora, L., 1732
Cangialosi, D., 1240
Capt, L., 853
Carella, J. M., 1766, 2110
Carneiro, O. S., 2216
Carreau, P. J., 283, 2158
Castricum, H. L., 1351
Caulfield, D., 673
Champagne, M. F., 749, 1755
Chan, C.-M., 609
Chang, D. Y., 917
Chang, F.-C., 1885
Chang, L.-H., 1605
Chao, T.-C., 1605
Chapleau, N., 209
Chaudhry, R. A., 2346
Chen, F. L., 331
Chen, G., 1571
Chen, H., 1258
Chen, H. J., 917
Chen, J., 1749
Chen, L., 1077
Chen, P., 18, 56
Chen, X., 1571, 2158
Chen, Y., 1509
Cheng, J.-W. J., 1605
Cheng, K.-C., 376
Cherukupalli, S. S., 1484
Chien, C.-F., 2288
Chiu, H. T., 2340
Chiu, S.-S., 2075
Cho, K. S., 1702
Cho, Y. G., 1187
Choi, D., 210
Choi, P., 853
Choudhury, N. R., 96, 736
Christiansen, J. deC., 548
Chun, Y. S., 541
Chung, C. I., 1702
Cioffi, M., 179
Clark, K., 1636
Cole, K. C., 231, 1003, 1046, 1132, 1197, 1212
Colton, J. S., 564, 588
Condé-Brana, M., 113
Costa, G., 1012
Covas, J. A., 2216
Cser, F., 1220
Cui, P., 1077
Cunha, A. M., 1522

Dall'acqua, C., 2229
Dargent, E., 223, 509
Dasari, A., 1738
Daver, F., 1579
De Lucca Freitas, L., 838
De Santis, F., 1
Debolt, M. A., 1800
Denault, J., 1212
Depecker, C., 231, 261
Dezern, J. F., 1360
Dhavalikar, R., 474
Diduch, C., 2308, 2318
Dimier, F., 518
Ding, F., 1811
Ding, P., 1132
Dingjun, J., 2070
Drozdov, A. D., 548
Dubay, R., 1925, 1934, 2308, 2318
Dubois, P., 1491
Dutta, N., 736
Dyck, C., 760

Edwards, S. A., 96
Eguiazábal, J. I., 1405
Elkoun, S., 209
Ellwood, K. R. J., 1498
Ellyin, F., 2240
Estrada, M. R., 1094

Fan, B., 814
Fang, G., 1132
Fang, X.-P., 2165
Fang, Y., 283
Farris, R. J., 1338
Fasulo, P. D., 1036
Fatnes, A.-M., 638
Faupel, F., 1351
Favelukis, M., 1900
Favis, B. D., 749
Felker, F., 1839
Fen, W., 2070
Feng, W., 2019
Fenouillot, F., 625
Fernández, M., 1792
Fesko, D., 1498
Feuz, L., 1360
Filip, P., 1328
Filippi, S., 1732
Frontini, P., 1707
Fu, X.-A., 345
Fu, X.-R., 1561
Fujikawa, S., 965
Fukasawa, Y., 2083
Fukumori, K., 1205
Funami, E., 1004, 1915
Fung, K. L., 580

Galindo, R. E., 1240
Galloway, J. A., 714
Gamstedt, E. K., 1987
Ganzeveld, K. J., 179, 1648
Gao, F., 1313, 1571
Gao, J., 1277
Garcia, J. L., 1295
Garcia, M., 1240
Garcia-Rejon, A., 1046, 1061

Indexed by Janet Perlman, Southwest Indexing, 610 East Bell Road, Suite 2-157, Phoenix, AZ 85022, (602) 569-7302.

Garcia-Turiel, J., 1240
Ge, X. C., 2134
Gemeinhardt, G. C., 1721
Gerard, J. F., 1231
Ghose, S., 794
Giacomin, A. J., 1811
Gilbert, M., 272
Giménez, E., 598
Goettler, L. A., 1103
Gogos, G., 388
Golob, J., 2005
Gong, S., 673
Gopakumar, T. G., 1162
Gorga, R. E., 929
Gors, C., 261
Gotsis, A. D., 973
Gregory, R. V., 28
Grenet, J., 509
Grizzuti, N., 1514
Grmela, M., 880
Gross, K. A., 1448
Guan, X., 433
Guan, Z. W., 1828
Gul, R. M., 1848
Günther-Schade, K., 1351
Guo, W., 376
Gupta, R. K., 1220
Gurer, C., 1247
Guschl, P. C., 1692
Gutman, E. M., 1716

Ha, M. H., 1858
Haba, Y., 1473
Hace, I., 2005
Hamada, H., 2327
Han, Z., 1122
Harkin-Jones, E., 638, 1379
Harrell, W. R., 28
Hasegawa, S., 186
Hatzikiriakos, S. G., 1543, 2047
Haworth, B., 272
Hayata, Y., 1915
He, G., 1277
Hedenqvist, M. S., 113
Helias, M., 940
Heuzey, M.-C., 2158
Higuchi, H., 965
Hinkley, J. A., 1360
Hirt, D. E., 34, 2247
Ho, J. R., 917
Hoa, S. V., 1132, 1178
Hoffmann, A. C., 179
Hogt, A. H., 973
Hong, C.-M., 2101
Hong, J.-I., 1702
Hong, M.-H., 2141
Hrymak, A. N., 779
Hsiao, Y. K., 2340
Hsieh, A. J., 825
Hsieh, W. H., 917, 2029
Hsu, S.-F., 2288
Hu, C., 72
Hu, X., 72
Huang, B.-F., 1605
Huang, J., 252
Huang, R., 1561, 2165
Huhtinen, H., 2052
Huneault, M. A., 749, 1755
Hunt, C., 673
Hunter, D. L., 1036
Hussein, I. A., 660, 2346
Huy, T. A., 1534
Hwang, T. R., 1170
Hwang, W.-G., 2117

Iannoni, A., 909
Intawong, N.-T., 1960, 2298
Isayev, A. I., 687, 697, 794, 983, 992, 2019
Ishiaku, U. S., 2327

Jacob, K. I., 312
Jana, S. C., 407, 2101, 2254
Janorkar, A. V., 34, 2247
Janssen, L. P. B. M., 179, 1648
Janssen, M., 1319
Jarashneli, A., 1716
Jeon, H. Y., 395
Jeschke, G., 1112
Jian, S., 2070
Jiang, D. D., 1122
Jin, Z., 1313
Johansson, P.-Å., 1615
Jonas, U., 1112
Jue, Z.-F., 331
Jutigny, M., 231

Kaddami, H., 1231
Kale, L., 252
Kalyon, D. M., 1941
Kamal, M. R., 853, 1046, 1061, 1152, 1187, 1949
Kang, E. T., 362, 2061
Kang, S. L., 1890
Karabanova, L. V., 940
Karger-Kocsis, J., 1083
Kato, M., 1205
Kattan, M., 509
Kazmer, D. O., 814
Kearns, M. P., 638
Kenig, S., 1670
Kenny, J. M., 303, 909, 1907
Khan, F., 1783
Kim, B. K., 1858
Kim, H., 1198
Kim, J., 2101
Kim, J. Y., 395
Kim, K. Y., 1890
Kim, O. S., 396
Kim, S., 283
Kim, S. H., 395
Kleist, U., 141, 1615
Klinedinst, D., 1360
Knoll, K., 1534
Koelling, K. W., 1295, 1866
Kontopoulou, M., 496, 1662
Koppi, K. A., 2148
Kosior, E., 1579
Kotomin, S., 615
Koyama, K., 965
Krajnc, M., 2005
Krawczak, P., 231
Krempl, E., 1783
Krishnamoorti, R., 825
Krishnan, M., 1491
Krishnaswamy, R. K., 2266
Kuipers, N. B., 1319
Kulichikhin, V., 615
Kulkarni, M. V., 1676
Kwak, H.-Y., 1890

La Mantia, F. P., 1732
Lafleur, P. G., 283, 880
Lagarón, J. M., 598
Lahti, J., 2052
Lakhram, R., 1925, 1934
Lambrigger, M., 2194
LaMontagne, M., 955
Lange, R. F. M., 1319
Lee, B., 1682
Lee, E. C., 1773
Lee, H. S., 992
Lee, J.-S., 1885
Lee, J. W., 79, 1170, 1198, 1682
Lee, K. Y., 1103
Lee, L. J., 1866
Lee, S., 1636
Lee, S.-I., 1429
Lee, S. M., 79, 1170
Lee, S. W., 1682
Leevers, P., 1627
Lefebvre, J.-M., 231, 261
Lei, J., 1277
Leong, Y.-K., 153
Leong, Y. W., 2327
Lesser, A. J., 2125
Leterrier, Y., 45
Lew, C. Y., 1027
Li, C. T., 687, 697, 983, 992
Li, H., 197, 1509
Li, J. Q., 452
Li, L., 2134
Li, Q., 1277
Li, R. K. Y., 580
Li, W. G., 2308, 2318
Li, X. H., 2134
Li, Y., 1077
Li, Z.-M., 1561, 2165
Liao, S. J., 917, 2029
Lievana, E., 1707
Lim, L.-T., 1460
Lin, Y.-S., 2075
Liou, G.-S., 376
Liu, A.-Y., 376
Liu, G., 197
Liu, Q., 463
Liu, T. J., 1970
Liu, W., 1178
Liu, Z., 861
Lloyd, W., 940
Long, J., 56
Loong, C.-K., 1692
López-Manchado, M. A., 303, 909
Lorenzetti, A., 2229
Lozano, T., 880
Lu, G., 1941
Lundquist, L., 45
Lüpke, T., 1534
Luther, S., 1642
Lyngaae-Jørgensen, J., 1061

Macosko, C. W., 714, 2090
Madison, P., 825
Mai, Y.-W., 609
Manero, O., 1094
Mano, J. F., 2174
Månson, J.-A. E., 45
Marchini, R., 131
Marcovich, N. E., 1594
Marimuthu, R., 1676
Marissen, R., 1319
Marrett, C., 588
Maspoch, M. L., 598
Masuoka, H., 2083
Matisons, J., 736
Matsushita, M., 1205
Matuana, L. M., 1551
McFarland, A. W., 564
McGarry, F. J., 1848
McNally, G. M., 1027
Mehrabzadeh, M., 1152
Meikle, S. T., 940
Menary, G. H., 1379
Meng, Y. Z., 580, 2134
Merino, J. C., 2110
Merrick-Mack, J., 615
Mewes, D., 1642
Michler, G. H., 1534

Mielewski, D. F., 1773
Mighri, F., 1755
Mikhalovska, S. V., 940
Miltz, J., 1670
Mirabella, F., 1588
Miri, V., 261
Misra, R. D. K., 1738
Mizoguchi, M., 2327
Modesti, M., 2229
Moore, A. A., 1721
Moore, R. B., 1721
Moreno, L., 1627
Moulart, A., 588
Moy, P., 825
Moysey, P. A., 2203
Mudalamane, R., 557
Muñoz, M. E., 1792
Murakami, A., 423
Murphy, W. R., 1027
Myers, D. J. B., 272

Nagarajan, P., 1998
Nakagawa, D., 1915
Nam, G. J., 79
Nandakumar, K., 1258
Napadensky, E., 825
Narasimhan, B., 929
Narayan, R., 1429, 1491
Narkis, M., 528, 1019, 1473
Nazábal, J., 1405
Neoh, K. G., 362, 2061
Ngo, T.-D., 1132
Nichetti, D., 1514
Nóbrega, J. M., 2216
Nocerino, G., 1012
Nuñez, A. J., 1594

Ogale, A. A., 1484
Ohshima, M., 186, 1004, 1915
Oka, K., 423
Okamoto, M., 1004
Oliveira, P. J., 2216
Ophir, A., 1670
O'Reilly, N., 615
Osorio, A., 2274
Osti, M., 760
Otaigbe, J. U., 648, 1692
Ottaviani, R. A., 1036
Øysæd, H., 352

Pabst, J., 1122
Pagé, D. J. Y. S., 1162
Pan, Q., 88
Panek, G., 1112
Pantani, R., 1
Pasanovic-Zujo, V., 1220
Pascault, J. P., 1231
Pastor, J. M., 1766, 2110
Peña, B., 1792
Peña, J. J., 1792
Perier-Camby, H., 625
Perilla, J. E., 2254
Perrin-Sarazin, F., 1142, 1212
Persyn, O., 261
Pesneau, I., 1061
Pham, T., 1588
Pham, X.-T., 1460
Pinho, F. T., 2216
Pino, N., 2110
Pirkle, J. C., Jr., 1267
Pitchumani, R., 433
Plotnikova, E., 615
Polacco, G., 2185
Polastri, F., 1368
Pontes, A. J., 891
Poslinski, A. J., 814
Pouzada, A. S., 891
Póveda, J., 2110
Prasad, R., 1220
Pugh, M., 1178

Qutubuddin, S., 345

Rachtanapun, P., 1551
Rajagopal, K. R., 123
Ramamurthy, P. C., 28
Rao, A. M., 28
Rao, I. J., 123
Räsänen, J. P., 2052
Rathod, N., 1543
Ray, S., 163
Ree, M., 1682
Rempel, G. L., 88
Ren, J., 825
Retolaza, A., 1405
Riemslag, A. C., 1319
Rigdahl, M., 141, 1615
Rink, M., 1368
Ritums, J. E., 113
Robertson, R. E., 1800
Rodgers, W. R., 1036
Rohlfing, D. C., 2266
Rohrmann, J., 1738
Rojo, E., 1792
Romero-Ibarra, I., 1094
Rose, T. L., 1247
Roth, S. C., 805, 898, 2148
Rwei, S.-P., 331, 376
Ryu, J. G., 1198

Sadanadan, B., 28
Sagron, A., 1716
Saha, P., 1328
Saiter, J. M., 223
Salovey, R., 452
Sammut, P., 1061
Sánchez-Solís, A., 1094
Santamaría, A., 1792
Santucci, S., 303
Sato, M., 965
Sato, S., 423
Sato, Y., 2083
Sau, M., 407
Saura, J. J., 598
Savolainen, A., 2052
Sbirrazzuoli, N., 518
Scarfato, P., 1012
Schleidt, S., 1112
Scrivani, M. T., 131
Sedlacek, T., 1328
Selke, S. E. M., 1551
Seo, Y., 1419
Seo, Y. P., 1419
Sergeeva, L. M., 940
Seth, T., 1676
Shai, A., 1670
Shelby, M. D., 1283
Shen, X., 2240
Shibata, M., 2041
Shin, B.-Y., 1429
Shin, J. W., 992
Shin, Y.-S., 1429
Shishan, W., 2070
Shuler, C. A., 2247
Siddaramaiah, 772
Siegmann, A., 528, 1019
Simard, Y., 955
Simon, G. P., 1448
Singh, A. P., 1977
Slusarz, K. R., 2266
So, H. W., 728, 1414
Somashekar, R., 772
Somashekarappa, H., 772
Sombatsompop, N., 487, 1960, 2298
Someya, Y., 2041
Son, Y., 541
Song, Y. S., 1170
Spalding, M. A., 2148
Spindler, R., 673
Spitael, P., 2090
St. Lawrence, S., 1839
Stastna, J., 2185
Sterzynski, T., 352
Strebel, J. J., 1588
Stroeks, A., 261
Su, Y. C., 917, 2029
Subhash, G., 463
Sukhadia, A. M., 2266
Summers, J. W., 1295
Sundararaj, U., 868, 1258
Sungsanit, K., 487
Suominen, T., 2052
Swamy, B. K. K., 772

Takacs, E., 1391
Takada, M., 186
Taki, K., 1004
Takishima, S., 2083
Tang, X., 72
Tanoue, S., 1046, 1061
Tate, M., 1391
Tatibouët, J., 1046
Taube, A., 728, 1414
Taylor, E. P., 648
Tchomakov, K. P., 749
Tchoudakov, R., 528
Teng, J., 648
Terenzi, A., 1907
Theriault, R. P., 814
Thibault, F., 1460
Thibodeau, C., 880
Thompson, M. R., 1391, 2203
Thongpin, C., 487
Titomanlio, G., 1
Tjernlund, J. A., 1987
Tjong, S. C., 580
Tofan, F., 749
Ton-That, M.-T., 1061, 1132, 1142, 1212
Toogood, R. W., 868
Torres, E., 736
Tripathy, A. R., 1338
Tsou, L. S., 917
Tsujii, T., 2327
Turng, L.-S., 673, 2274
Tzoganakis, C., 18, 56

Ueda, M., 1877
Ulcnik-Krump, M., 838
Unigovski, Y., 1716
Utracki, L. A., 1003, 1046, 1061, 1197

Valentini, L., 303
Van Vondel, M. P. Y., 1648
Van Zyl, W. E., 1240
Varner, J. E., 1247
Vasil'ev, G., 615
Vázquez, A., 1766, 1907
Vergnes, B., 518
Verhoeven, V. W. A., 1648
Verweij, H., 1240
Viana, J. C., 1522, 2174
Vincent, M., 518
Viswanath, A. K., 1676
Vlachopoulos, J., 1391
Vlachovicova, Z., 2185
Vogel, R., 2047
Vohra, S., 312
Vora, R. H., 362

Walia, P. S., 1839
Wang, D., 1122
Wang, J., 1122, 2061
Wang, J. T., 580, 917, 2029
Wang, M., 2083
Wang, W. C., 362
Wang, W. Q., 496, 1662
Wang, Z., 72
Warley, R., 697
Watanabe, T., 2083
Wei, K.-H., 2117
Weiss, R. A., 541
Wen-Ping, W., 2335
White, J. L., 210, 2141
Wilkie, C. A., 1122
Willett, J. L., 1839
Willi, F., 45
Williams, D. E., 1338
Williams, M. C., 660
Wong, D. S. H., 1970
Wooster, J. J., 34
Wright, J. D., 779
Wu, C.-M., 1083, 2117
Wu, J.-Y., 2288
Wu, T.-M., 2288
Xanthos, M., 474
Xi, C., 1391
Xia, Z., 2240
Xiang, M., 197
Xiaodong, O., 2070
Xie, B.-H., 2165
Xu, Z.-H., 1987
Xue, A., 18

Yamaguchi, S., 2327
Yan, D., 861
Yan, F. Y., 1448
Yanagimoto, T., 1004
Yang, C. K., 1970
Yang, M.-B., 1561, 1656, 2165
Yang, S., 1561
Yang, W., 1561, 1656
Yang, X., 1749
Yang, Z. J., 1379
Yao, D., 1998
Yau, H. T., 917
Yeow, Y. L., 153
Yilgör, E., 1941
Yilgör, I., 1941
Yin, B., 1656
Yin, L., 1749
Yoon, J., 1682
Yu, D., 72
Yu, L., 1866
Yu, Q.-S., 1656
Yuan, M., 673

Zanzotto, L., 2185
Zatloukal, M., 1328
Zeevenhoven, B. L. F., 973
Zerda, A. S., 2125
Zhang, G., 72
Zhang, Y., 72
Zhang, Z., 72
Zhao, H. X., 580
Zhao, L., 853, 2061
Zheng, K., 1077
Zhou, E., 1749
Zhou, H., 948
Zhu, F., 1313
Zhu, Q., 2134
Zhu, S.-H., 609
Ziegler, H. J., 1351
Zumailan, A., 223